

MARCH 1959

UNIVERSITY MICROFILMS
313 NORTH FIRST ST.
ANN ARBOR, MICH.

Industrial Development

and manufacturers record

THE NATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION



Donald B. Lourie, dynamic president of the Quaker Oats Company discusses his company's expansion techniques, designed to produce "Progress from Talent and Technology." (Page 74).

AREA REPORTS

Puerto Rico p. 17
Outside U.S.A. p. 6

\$12 PER YEAR
A CONWAY PUBLICATION

Life is *Really* worth living in *CIPS* TOWNS



People like living in CIPStowns. No fighting the suburbia crowd for a seat on the commuter train. Home and all the pleasures of *really* living are just a few minutes away from work.

If you want to locate your new plant away from the hubbub of crowded industrial centers . . . but still in the heart of resources and markets, manpower and movement . . . CIPStowns are the answer. Here is where plants and people have room to breathe, to grow and to prosper.

For information on available plant sites, write, wire or call our Industrial Manager. He'll serve as your confidential assistant.



Historic Lincoln shrines dot the countryside . . . and offer inspiration to the people of CIPStowns.



Churches of all faiths have a wide variety of religious, educational and cultural programs in CIPStowns.

CIPS **CENTRAL ILLINOIS PUBLIC SERVICE COMPANY**
GENERAL OFFICES: ILLINOIS BUILDING, SPRINGFIELD, ILLINOIS

INDUSTRIAL DEVELOPMENT

and manufacturers record



Volume 128 March 1959 Number 3

Issued monthly, except semi-monthly in May and October (14 issues a year), by Conway Publications, Inc., 109 Market Place, Baltimore 2, Md. Tel. LExington 9-7065.

CONTENTS

| | |
|---|----|
| Plant Location Outside U.S.A. | 6 |
| Every year many U. S. firms make the decision to extend their operations in international markets. ID/MR investigates plant and investment opportunities in many of the world's prime market areas. | |
| Puerto Rico—A New Horizon for Industry | 17 |
| In a special 32-page report, Puerto Rico's great industrial renaissance is covered in detail. This historic and beautiful island in the Caribbean offers much to firms seeking unusual manufacturing opportunities. | |
| Important Plant Location News | 49 |
| I.D./M.R.'s exclusive listings of all significant new plant construction announced last month in the 49 states, possessions, Canada, and many other countries. | |
| Site Selection Handbook Analysis | 61 |
| A summary of development activity throughout the country plus a new tabulation of plant location information sources. New listings are also published this month. | |
| Northwest Area Weather Factors | 66 |
| Number 4 in a series of exclusive reports on the effect of weather on plant location. This month covering Washington, Oregon, California, Idaho, Montana and Wyoming. | |
| Progress From Talent and Technology | 74 |
| The president of the Quaker Oats company (see cover) discusses his company's philosophy in new plant location, and plans for future development. | |

EDITORIAL ADVISORY BOARD

Gordon E. Garnhart, Director of Real Estate and Ins., Westinghouse Electric Co., Pittsburgh
F. E. LeVan, Sr., Architect and Civil Engineer, E. I. duPont Co., Wilmington
Otto Pongrace, Dir. of Area Development, New York Central System
Stuart Parry Walsh, Director, Industrial Planning Associates, San Francisco
Robert E. Boley, Secretary, Industrial Council, Urban Land Institute, Washington, D. C.
Carl Lloyd, Exec. Vice Pres., Society of Industrial Realtors, Washington, D. C.
D. M. Lynn, President, American Railway Development Association, Cleveland, Ohio
Dennis O'Harrow, Exec. Vice Pres., American Society of Planning Officials, Chicago, Ill.
Paul Monk, Exec. V.P., Assn. of State Planning and Development Agencies, Wash., D. C.

Victor Roterus, Chief, Area Development Division, U. S. Dept. of Commerce, Washington, D. C.
Reuben Siverson, Chamber of Commerce of the United States, Washington, D. C.
Charles L. Hamman, Editor, Western Resources Handbook, Stanford Research Institute, Stanford, Calif.
Robert Wolf, President, Great Lakes States Industrial Dev. Council, Canton, Ohio
Clayton D. McLendon, Chairman, Development Committee, Southern Association of Science and Industry, Atlanta
Melvin Peach, Manager, Industrial Dept., New England Council, Boston
J. Eric Jones, President, Northeastern Industrial Developers Association, Harrisburg

STAFF

H. McKinley Conway Editor and Publisher
Jouett Davenport, Jr. Managing Editor
Donald V. Quinn Editorial Assistant
Suzanne Johnson Editorial Assistant
William Prueitt Advertising Manager
M. H. Harris Asst. Advertising Mgr.

Guy H. Tucker Circulation Manager
Stan May Business Manager
Harold L. Sorrell Production Manager
Sadie Kelly Elizabeth Edwards
Ernestine Edwards

OFFICES AND REPRESENTATIVES

ATLANTA—Editorial headquarters office, 2592 Apple Valley Rd., North Atlanta 19, Ga., Tel. CE 3-4015 or CE 3-0242.
CHICAGO—Don Dennett and Associates, Publishers Representative, 161 East Grand Avenue, Tel. Whitehall 3-2048. Don Dennett, Representative.
LOS ANGELES—Duncan A. Scott & Company, Advertising Representatives, 1901 W. 8th St., Tel. DUnkirk 8-4151. Peter Schulz, Representative.
NEW YORK—A. B. McClanahan, Advertising Representative, 295 Madison Ave., N. Y., Tel. LExington 2-1234. Victor Whitlock and David J. Mann, associates.
SAN FRANCISCO—Duncan A. Scott & Company, Advertising, 5th Floor, 85 Post Street, Tel. GARfield 1-7950. Cyril B. Jobson, Representative.
WASHINGTON, D. C.—Caldwell R. Walker, Washington Correspondent and Associate Editor, 2415 E. Street, N. W., Tel. District 7-3727.

Annual subscription rate for INDUSTRIAL DEVELOPMENT including MANUFACTURERS RECORD, the SITE SELECTION HANDBOOK, and the BLUE BOOK-DIRECTORY is \$12 per year. (A 50 per cent discount is allowed manufacturing executives responsible for selecting sites for new facilities. Enclose card or letter-head as proof of position). Entered as second class matter at Baltimore, Md. under the act of March 3, 1879.

Guaranteed minimum circulation 16,000 copies. Copyright 1959 by Conway Publications, Inc.

MARK THE SPOT HERE AT JOHNSON CITY, TENN.

On the most important rail link between the Great Lakes Region and the Eastern Seaboard... within 600 miles of over half the national market.

IN THE VALLEY OF DECISION FOR INDUSTRY

Mapmakers... Mead Corp.
Bloomington Mills... Sperry
Farragut... Tennessee Eastman... W. S. Grace... Business Calculating... all these leaders are now located and planning expansion in the "Great Valley" of Upper East Tennessee.



**WHERE 500 ACRES
OF PLANT SITES
ARE NOW AVAILABLE...
ALL ON THE
CLINCHFIELD R.R.**



ALL PLUS THIS:

- Metropolitan area of 225,000 population
- \$2,000,000.00 Industrial Bond Program
- Complete Industrial Location Services.

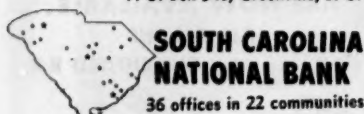
SEND FOR: A copy of Johnson City Industrial Sites. Also ask for "Reports from Industry," a study of reasons why national manufacturers came to Upper East Tennessee, and why they expect to stay there and grow.

THE INDUSTRIAL COMMISSION*
339 E. MAIN STREET
JOHNSON CITY, TENNESSEE

ON
THEIR
WAY
TO
SOUTH
CAROLINA

where prime
industrial sites
new corporate tax laws
and proven production
are at your service.

For full information contact
Chauncey W. Lever, Vice-President
Commercial and Industrial
Development Division
P. O. Box 540, Greenville, S. C.



**SOUTH CAROLINA
NATIONAL BANK**
36 offices in 22 communities

Member Federal Deposit Insurance Corporation
All banking facilities and services.



EXECUTIVES!

...**"SITE-SEE"**
**INDUSTRIAL
COLORADO**

Executive's portfolio without
obligation. A concise,
up-to-the-minute presentation of
Colorado's wealth of
industrial opportunities. Complete data
on Colorado's booming expansion,
vast new markets, new space-age minerals,
resources, plus Pleasant Living... the
industrial bonus of Colorado's magic climate.
Discover today why growing industries
are "Site-Seeing" Colorado. Inquiries
remain confidential.

Send for your portfolio
of Industrial
Colorado

COLORADO
DEPARTMENT OF DEVELOPMENT
18 STATE CAPITOL
DENVER 2, COLORADO

IN PURSUIT OF OPPORTUNITY...

Despite taxes and bureaucrats, this vast land of ours is still teeming with opportunities for those who will build a better mousetrap. If you want reassurance, while away your next idle evening looking through the catalog of one of the mailing list houses. You'll find there are 113 firms still manufacturing snuff, and a like number making fly paper. Altogether, the current list shows 347 manufacturers of artificial flowers and feathers, 183 makers of ash trays, 28 nut pick producers, 115 sardine packers, 41 manufacturers of rubber bands, 52 zipper constructors, 999 producers of bar equipment, 33 artificial eye makers, and an impressive 1109 bean canners! But that's not all. Our expanding economy includes 74 beer pump manufacturers, 14 firms making bicycle toe clips, 5 billiard cue tip people, 10 bowling alley brush producers, 55 liniment mixers, 36 hair pin manufacturers, 44 lightning rod fabricators, 9 megaphone finishers, 101 bilge pump makers, and 103 push-button manufacturers. Who says opportunity is dead!

You can't claim him on your income tax return, but you have another dependent climbing on your back. Latest report on Social Security is that five out of ten aged people are now on the rolls and the ratio will steadily increase to nine out of ten. By 1980 we estimate each employed person will be providing for one other person outside his own family.

Now that we've overcome the mental block of adding a 49th state, let's not waste any time bringing Hawaii into the fold.

A national network of 50 sampling stations has been established to measure the quality of water in interstate streams. Public Health Service is planning 200 more measuring stations and urging states to set up several hundreds of others on intrastate streams. The result will be much more comprehensive data on potential water sites.

This seems to be the big year for focusing attention on industrial development activities in Canada. American Industrial Development Council is meeting in Montreal April 19-22, and American Railway Development Association will convene in Toronto May 24-27.

Westinghouse President Mark W. Cresap, Jr. deserves congratulations for the statement he made recently in Tulsa explaining his firm's position on taxes as a factor in plant site selection: "We don't want special tax treatment, but equitable treatment. We try hardest to stay out of a community with tax instability. A tax structure that seems favorable today may be changed tomorrow. Instability may be caused by some concealed economic imbalance in area industry; by unrealistic tax laws; or by methods of raising tax revenues which favor one type of taxpayer at the expense of another. A kind of instability may develop when a community operates under restrictions which severely limit its methods of collecting tax revenues. In such a community, the taxing bodies are forced to rely on unnatural sources of income which are clearly unable to provide the required community services."



Cresap

OPINION

Guess who's turned up as an ardent area developer? Yep, none other than Comrade N. S. Khrushchev, according to a release from the Soviet Embassy. In 26 pages of 8 point type Comrade K demonstrates that he knows a lot about industrial development or has a very capable speech writer. Goals set for the next 15 years are impressive by any standards: electric power output to be expanded 330 per cent, cement by 400 per cent, natural gas 1300 per cent, all basic industries up 200 to 300 per cent. It's looking more and more like the cold war is simply an industrial development race.

Understatement of the year—the AEC has casually announced an "increase" in its site requirements "as a further safeguard and buffer zone for expanded operations" at the National Reactor Testing Station in Idaho. The expansion adds 141,000 acres, giving a total site area of 894 square miles, or more than 100 acres per employee. If site needs continue to grow like that, we won't land on the moon a minute too soon.

Resources For The Future has held another thought-provoking session, this one covering the science of genetics. Following up a paper presented by Nobel-prize winning scientist, Dr. George Beadle, was an interesting commentary by one Henry A. Wallace, generally identified as a politician, but a well-informed planner in his own right:

"World population now increases at the rate of about 48 million a year and probably 30 million came from areas where the income per capita is less than one tenth that of the US and where the percentage of illiteracy is more than 50 per cent. These 30 million, born into areas where the people have seen their misery steadily increasing year after year, will, as their numbers soar, become the most powerful political force in the world. In the long run Russia is even more threatened by the population explosion than the U.S."

Hear! Hear! The U.S. Chamber has taken the position that Congress should not fix wages (via minimum wage legislation) until it fixes production standards as well. A recent Chamber bulletin points out that paint brushes are limited to four inches and the use of spray guns is restricted . . . electricians are limited on the number of outlets they can wire in a day . . . ready-made window frames and cabinets are outlawed . . . carpenters refuse to hang more than a certain number of doors per day . . . union rules require pipe to be threaded on the job . . . ready-mix concrete prohibited on some jobs . . . laborers not allowed to unload trucks . . . and countless other featherbedding practices increase cost of building plants and homes in many sections of the country.

Congratulations department—Otto Pongrace, plant location expert for Ford Motor, has been named to head the area development work of New York Central. . . Fred Elliston, Texas Electric Service, has produced a valuable bibliography of industrial development and plant location material. . . David D. Bohannon, California community builder from San Mateo, has been reelected President of Urban Land Institute. . . Fred H. Bair, Jr., Executive Secretary of the Florida Planning and Zoning Association, has made a contribution with his new model zoning ordinance text . . . and we like the planning calendar sent by Jim Kennedy of Barrington Associates, New York.



Bohannon

Don't be surprised if someone calls on you soon from the Bureau of Indian Affairs. Commissioner Glenn Emmons and developer director Lowe are conducting an aggressive campaign to find jobs for Indians near Indian lands. Some tribes, like Navajos, have funds to help finance your new plant. Interior Department may also help with revolving loan fund. Already, Lowe has field men in Cleveland and Los Angeles to sell the program.

—H.M.C.

Pick Any
SOUTHERN
Area

- Del. ★
- Md. ★
- Va. ★
- W. Va. ★
- N. Car. ★
- S. Car. ★
- Ky. ★
- Tenn. ★
- Ga. ★
- Ala. ★
- Miss. ★

ONE CALL

brings you a complete list of

EVERYTHING AVAILABLE

- ★ **Plants**
- ★ **Sites**
- ★ **Community Propositions**

Choose from everything being offered today. Also—many fine Northern plants and sites.

BINSWANGER

SOUTHERN DIVISION
Leading the Nation in Industrial Real Estate
 1420 WALNUT ST., PHILA. 2, PA. • PE 5-8282
 New York • Charlotte, N.C. • Yemassee, S.C.

WE WANT — NEED NEW INDUSTRY

Our Industrial Development Organization representing the cities of LA SALLE, PERU, OGLESBY, SPRING VALLEY, LADD and DE PUE requests the opportunity to tell you about:

- 1) Excellent transportation via Illinois Waterway, 2 U.S. Highways, 7 Railroads, several Trucking Lines.
- 2) Ready availability of skilled workers.
- 3) New Industrial Building Corporation.
- 4) A community which affords gracious living.

Write: INDUSTRIAL DEVELOPMENT DIRECTOR
Box 446-I LA SALLE, ILLINOIS



**LOOK WHO'S
HERE**

**LEVI STRAUSS
& CO.**



**American
Nuc**

FIND OUT WHY

These firms (and many others) like their locations . . . Why you, too, will prosper in the Great Industrial Valley of East Tennessee.

Write for the new booklet,
"Look Who's Here!"

COMMITTEE OF 100

Knoxville Chamber of Commerce
918 Gay St., SW Phone 3-5166
Knoxville, Tennessee

MONROE
Louisiana
**OFFERS CHOICE
SITES IN
THREE
INDUSTRIAL
DISTRICTS**

For complete
details write
on your
letterhead for
53-page
Industrial
Survey.



**MONROE
AREA INDUSTRIAL
DEVELOPMENT CORP.**



Walter Koch
Executive Vice President
P. O. Box 1284
Monroe, Louisiana
PHONE: Fairfax 2-7594

LETTERS

SIRS: I joined the Avondale Mills in 1897 and the MANUFACTURERS RECORD was one of the few trade magazines that came to our desk at that time. Not only was I interested in reading matter in this periodical devoted so loyally to industry but there was a personal friendship. As a matter of fact, if you will look in your January 2, 1919 issue, you will find there is a story of the cotton problems written by my father, the late Governor B. B. Comer, at the request of Mr. Edmonds. . . .

Southerners are proud of the MANUFACTURERS RECORD and its history and we are proud of the part that Mr. Edmonds has played in encouraging us to strive for that which was best for an industrial south; for a better south. If you will go back over the last seventy-five years it will be a continuing record of how one man, directing the policies of one magazine, was continually working for what was best for his section; for the country as a whole as a matter of fact.

In striving for an industrial south, Mr. Edmonds knew we had to have a protective tariff and when the South and the Democratic party were lined up for free trade, like us today, he was fighting for a tariff equalizing American standards and wages to those low standards across the ocean. He was fighting for opening up the Tennessee River and having a canal around Muscel Shoals; he was fighting for building and loan associations to help the share cropper system; he was fighting to take the convicts out of competing industry and putting them on the roads. Like my father, he was fighting for immigrants to come to the South from the West and North instead of from across the ocean.

. . . I think it is fitting to say that to him is due credit for our having a Department of Commerce with its Secretary a member of the President's Cabinet. In 1891 he was suggesting experiments in rain making by employing explosives set off at high altitudes. He wanted a department for good roads, others on railroads, mining, textiles, lumber, machinery, etc. . . .

Richard H. Edmonds of Baltimore carved his 'name' with a magazine—the MANUFACTURERS RECORD.

DONALD COMER
Chairman, Executive Board
Avondale Mills, Inc.
Birmingham, Alabama

SIRS: Recently I had an opportunity to look through the December, 1958 issue of your fine publication INDUSTRIAL DEVELOPMENT and I was particularly interested to see the feature article on the American Industrial Development Council. Naturally, my eye was caught by the picture of our own Stewart Neel who was shown with others attending

4

March, 1959

at your fingertips in

**GREATER
BURLINGTON
VERMONT**



**Abundant Cold Water,
Abundant Electric Power**

Lake Champlain is the nation's largest fresh water source with a sub-surface temperature constantly below 43° F. Dependable electric power is available for commercial use. A labor surplus area, Greater Burlington offers exceptional advantages to manufacturer of product with high value added in manufacture. Write for details!

**GREATER BURLINGTON
INDUSTRIAL CORPORATION**

191 College St. Burlington, Vt.
Tel. UNIVERSITY 2-5726



**on Central
East Texas**

where conditions are ideal for industry
Contact Industrial Development Dept.

**SOUTHWESTERN ELECTRIC
SERVICE COMPANY**

MERCANTILE BANK BLDG. • DALLAS, TEXAS

Why Locate in MISSOULA, MONTANA

1. It's a progressive growing town of 40,000 where small industry is welcome. City, county planning board protects your property values.
2. Both private and government electric power, natural gas, ample water supply. Five rivers converge here.
3. Two transcontinental railroads, airlines, and U. S. transcontinental highways including the new Interstate system.
4. Moderate tax base and cost of living, diversified income sources maintain an even economy.
5. Three excellent hospitals and several medical clinics.
6. Protected by mountain ranges we have a moderate four season climate.
7. State University with 3,000 students—part time employment source.
8. Beautiful Dude Ranch country — recreational facilities for all—Midway between Glacier and Yellowstone National Parks—6 ski runs.
9. 41 churches of all faiths and 20 modern school buildings.
10. Three first class hotels, and five theatres.
11. Chain and local department stores—centralized shopping district.
12. Progressive weekly and daily newspapers. Three radio stations and one TV station with live 3 network service.
13. Good library, modern Post Office and Federal building. Headquarters for the U. S. Forest Service.
14. Midway between Lead, Zinc, Silver districts of Idaho; Copper Manganese of Butte; and Aluminum (not of Kalispell); Phosphate, Fluorspar, Barite Lime stone, Ilmenite, Vermiculite in neighboring counties.
15. Surrounded by timber—Pine, Larch and Fir—we have Lumber mills, wood working plants and Pulp mill operating. Associated chemical industries welcome.

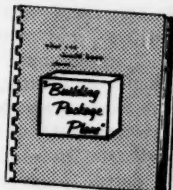
Write for brochure or see us
for your factory site.

FAR VIEWS DEVELOPMENT COMPANY
127 East Main Street
MISSOULA MONTANA
A. J. Mosby, mgr.

Your own NEW PLANT in CANADA at no cost but RENT

Your own new plant — ANYWHERE IN CANADA — built by Toronto Industrial Leaseholds (1957) Ltd., Canada's leading industrial development firm. Recently completed I.L. projects, for well-known American firms, include: American Machine & Foundry, Nestle-Le Mur, Eversharp Pen, Armstrong Cork Ltd.

Write on your
letterhead for
our informative
28-page
illustrated
brochure, "What
you Should
Know About
Building
Package Plans"



Toronto
INDUSTRIAL LEASEHOLDS
(1957) LTD.

An affiliate of Webb & Knapp (Can.) Ltd.
12 Sheppard St., Toronto, Ont., Can.
Offices in Vancouver and Montreal

LETTERS

the Atlanta meeting. . . .

You have an excellent magazine, in our opinion, and I am sure that it is fulfilling a very basic need in the field of industrial development. Certainly we here at Puget follow it with keen interest.

FRANK McLAUGHLIN, Pres.
Puget Sound Power & Light Co.
Seattle, Washington

SIRS: We have just received our copy of your December, 1958 issue of **INDUSTRIAL DEVELOPMENT** magazine. There are several very interesting articles in this particular issue which I would like to have our field supervisors read. Would it be possible for you to send me four additional copies of this December issue, so that I can distribute them to our supervisors? . . .

J. I. McNAUGHT, Pres.
Western Tire Auto Stores
Chicago, Illinois

► Copies sent.

SIRS: We recently came across a copy of your **INDUSTRIAL DEVELOPMENT** and **MANUFACTURERS RECORD** and immediately sent in our subscription. This magazine is the finest source of information we have seen on new industrial locations and plant expansion news. . . .

PAUL F. SCHMITT
Globe International Detective System
Philadelphia, Pennsylvania

SIRS: I would like to have permission to use the statistics on Mississippi Economic Data: Manufacturing appearing in the **SOUTHERN INDUSTRIAL DIRECTORY**, 1958 in a forthcoming elementary school history text. . . .

R. A. McLEMORE
Mississippi College
Clinton, Mississippi

► Permission granted.

SIRS: On January 31, 1959 the Cleveland Plain Dealer published excerpts from an article, which appeared in your current issue of **INDUSTRIAL DEVELOPMENT** and **MANUFACTURERS RECORD**. Your findings on the "Best Location in the Nation" were extremely interesting.

I will appreciate it if you would forward a copy to me. . . .

JOHN C. BUMSTEAD
Alden E. Stilson & Associates
Cleveland 15, Ohio

► Copy sent.

SIRS: In discussions with personnel of the Knoxville office of the Tennessee Agricultural and Industrial Development Commission on an industrial sites study of Blount County, Tennessee, I was referred to an article which appeared in **INDUSTRIAL DEVELOPMENT**.

If it could be made available to me I would greatly appreciate your sending to me a copy of "700 Plant Location Factors" . . . The information presented in this article should prove valuable to us in our work with Blount County.

CLEMENT E. BABB
Tennessee State Planning Comm.
Knoxville, Tenn.

► We are always happy to furnish reprints upon request.

March, 1959

✓ CHECK ✓

FLORENCE THE CENTER

OF
EASTERN S. CAROLINA
FOR

—TRANSPORTATION

Air, Rail & Highways

—MEDICAL SERVICES

5 Hospitals; 75 MD's & Dentists

—EDUCATION

Two-Year School of Univ. of S. C.;
Business College & fine public schools

—CULTURE

City Art Museum; Little Theatre;
Civic orchestra & other attractions

—RECREATION

Full-time youth program at parks;
outstanding hunting, fishing & golf.

—SHOPPING FACILITIES

More than 500 modern and
attractive stores of all kinds.

—RECRUITABLE LABOR

1450 skilled, 3100 semi-skilled & 4700
unskilled workers available in 30-mi.
radius.

**FLORENCE INVITES YOU TO COME AND
ENJOY ITS MANY ADVANTAGES FOR
INDUSTRY AND A HAPPY LIFE.**

**Contact Industrial Department
Chamber of Commerce
Box 948, Florence, S. C.**



TRACY, CALIFORNIA . . . WAS THIS FIRM'S DECISION

"American Sisalkraft Corporation, manufacturer of waterproof, reinforced protective papers for building, and industry, selected Tracy, Calif. primarily because of its central location and its excellent highway and rail facilities to serve the western states, Hawaii, Alaska and Far Eastern Markets. In addition to two trans-continental railroads and three primary highways, shipments are facilitated by direct connections to seven other transcontinental rail carriers, utilized in our shipments. . . . Proximity to the San Francisco Bay area (60 miles) also was an important factor. Excellent working relationship with the city government played an important part in our firm's decision to locate in Tracy and in present operations."

—Allan H. Mackay,
Vice President

Write For Industrial Sites File
Tracy District Chamber of Commerce
Tracy, California

PLANT LOCATION



By Jouett Davenport, Jr.

Rapidly expanding markets in all parts of the world are creating excellent opportunities for growth-minded U. S. firms. This special report discusses some of the factors involved in planning for and locating a plant in a foreign area.

IN the earlier days of the United States, and in the period between the end of the War between the States and beginning of World War I, a great deal of the economic development of the country was financed by British and European capital.

Today, however, there exists a reversal of that historic capital flow, and it may well be that for several decades to come the United States will be financing a substantial part of Europe's renaissance of production and material well-being.

U. S. investor interest is increasing likewise in other areas of the world. And, generally speaking, it is consensus of experts in the foreign commerce field that unusually good opportunities exist now for expansion of U. S. business and industry abroad.

For example, at the recent National Foreign Trade Convention held in New York City, the conclusion could be drawn from comments of the chief speakers there that the construction of foreign plant facilities constitutes one of the best expansion bets for U. S. businessmen. It is felt that this is particularly true now in the underdeveloped nations.

J. C. Delaplain, senior vice president of Willys-Overland Export Corporation, Toledo, observed that where there is nationalism there is also a potential market. This is not necessarily a market for imported manufactured goods, he stressed, but rather one that is open for capital, capital

equipment, and for technical knowledge.

Tom Lilley, vice president and general manager for the Ford International Division of Ford Motor Company, added this comment: "The basic trend is moving in one direction—the direction of increased local industrialization, and for us, increasing emphasis on investment as compared with export trade." Mr. Lilley said further: "This surge toward rapid economic development is deep-seated and will not be stopped by any amount of local political change. If it can't be done one way it will be done another."

B. K. Nehru, India's Commissioner General for Economic Affairs in Washington, made the suggestion that American business leaders take a greater interest than they have done previously in examining the possibilities of developing markets in the underdeveloped regions.

He said that by setting up manufacturing enterprises where conditions are favorable, great good will accrue to foreign trade in general. His opinion was that those who got in on the "ground floor" would have a very distinct advantage.

An idea that there should be a combined private and Federal Government program to develop standardized atomic power plants, which can be mass-produced for use in underdeveloped areas of the world, was advanced by William E. Knox, president of Westinghouse Electric International

OUTSIDE U. S. A.

Company. Mr. Knox recommended, too, that the U. S. Government should sell fissionable materials as well as farm commodities to foreign countries for their local currencies rather than for dollars.

An optimistic view of the Pacific area has been expressed by Norman Klein, world traveler and director of export for Morehouse Industries of Los Angeles.

Following a trip which included 15 meetings with government and industry representatives in New Zealand, Australia, the Philippines, Formosa and Japan, he concluded that both the opportunity and desire for more industrialization is stronger than ever in those areas.

In general, he said, the processing industries are prospering and they are interested as never before in superior manufacturing equipment from the United States.

Being well aware of their stake in foreign countries and the profit possibilities that are there, latter day Marco Polos from the United States have journeyed far and wide to find new markets in old places.

Where are these markets? What are some of the peculiar problems that the plant builder finds in such far-flung places as South Africa, Brazil or Indonesia? How much help can he expect in selecting a site? What is the attitude of government?

What financial problems will he encounter? What authoritative sources

does he have access to in getting information about how to proceed on a plant building program in some particular foreign country?

Obviously, answering all these and other questions on a global basis would be impossible within the limitations of space here, but an attempt will be made to give useful general information about foreign investments and to cite specific typical examples of factors that affect plant locations of particular industries in various foreign areas.

Insofar as general information about foreign investment is concerned, the Bureau of Foreign Commerce of the U. S. Department of Commerce has available a concise checklist which is applicable to virtually any country in which you may be contemplating location of a manufacturing or distributing facility.

As supplied to I.D., for the purposes of this report, by E. E. Schnellbacher, director of the Office of Trade Promotion, points in the checklist include:

Market Potential: What peoples of the world appear most eager to have the types of goods, techniques and services you produce? The advanced economies of a number of countries represent an immediate market, but don't forget the newly independent and developing countries which contain almost half the world's population. Remember, progress and change are not confined to the well-established and productive nation.

Competition: Who are your competitors? How much of the market do they command? Free competition is good, but don't try to buck a government monopoly.

Raw Materials: Does the country of your choice have the necessary raw materials? Are they in sufficient quantity to meet your requirements? If it doesn't, you may find yourself fighting import restrictions to maintain an assembly operation.

Plant Site: Does the site you have selected have adequate electric power and water not only to meet your immediate needs but also a future expansion program? Are adequate transportation facilities available? If so, what percentage of your profits are going to be lost on inland transport costs to get the materials you need, and the products you manufacture into the hands of the consumer? Are communications facilities adequate? You could find yourself on a pony express route, even in 1959.

Labor: Is there an adequate labor force available to you? If so, does it have the skills you require? Equally important, have you thoroughly familiarized yourself with the local labor legislation under which you must operate?

Local Participation: Are you aware of the importance of participation with local interests? This requires a study of local attitudes, ways of doing business, psychology of the people. A number of countries require

a certain amount of local participation, but even where it isn't a requirement, the local businessman with some of his own interest at stake is more concerned with the success of the operation than the one who has no direct interest.

Training: With or without a foreign partner, you are dependent upon local labor. Are you giving adequate attention to local staffing and the need for training? This should include plans to bring certain of your local staff to the United States for training in the operation of the parent company, system of distribution, accounting techniques, and so on.

American Personnel: Arrangements must be made with principal government, regional and municipal officials for the entry and temporary residence of your engineers, technicians and managerial staff to oversee operations. If you haven't done this, you may find you have an expensive plant but no manager for the all important initial stages of production.

Local Legislation: Just as you must operate within certain legal limits within the United States, your foreign operation also must conform to host country law. Knowledge of import restrictions, exchange controls, administrative regulations, taxes and tariffs is essential. Unless previous agreement is reached, local law may or may not permit you to convert your profit into dollars for repatriation to the United States. A local attorney and/or accounting firm can often glide you over the legal obstacle course with greater ease than your American counsel.

Responsibilities: Whether or not your investment is small or large, providing employment for a maximum or minimum number of people, and ultimately contributing to an improved standard of living, you are nevertheless a guest in a host country. As such, you should be prepared to observe appropriately the established customs and traditions of the area. This includes the treatment of local employees as full members of the firm's family with opportunities for development and advancement.

Type of Investment: Through consultation with other American foreign investors you can avoid earlier pitfalls and develop the best practical long-term arrangement or agreement with respect to your investment . . .

and your future relationship with your foreign participants and the host government.

Industrial Property: If your investment plans concern only a licensing arrangement, give as much thought and care to your proposed agreement as you would to an investment requiring the considerable expenditure of capital and equipment. Your patent rights may or may not be recognized in some areas of the world.

Money Savers: The knowing in-

vestor will want to make an on-the-spot survey of his foreign plant site, negotiate personally with his foreign partner, if any, and discuss his project with appropriate foreign government officials. You can save time and money, however, by utilizing the wealth of information available to you through the Bureau of Foreign Commerce before leaving the United States.

Checklist Answers: The knowing investor will want to make an on-the-

U. S. MANUFACTURERS LOOK



At Bogota, Columbia, Parke, Davis & Co.'s new production and administrative facility serves the company's operation in Columbia and Ecuador. New plant facilities serving a wide variety of consumer and industrial markets are planned and under construction in many areas of South America. Parke, Davis owns and operates manufacturing and distribution facilities in over thirty overseas locations.

vestor, after satisfying himself on the 12 points of the checklist, also will give serious thought to how he can attain his goal with the least expenditure of money and equipment. For example:

1. If your investment includes the supply of machinery and equipment as a substantial contribution on your part, you may find machinery designed for less automation may more than meet the needs of your foreign operation where labor is plentiful and requires the training or development of skill such equipment can help produce.

2. In a number of countries with which the United States has agricultural commodity agreements under the Agricultural Trade Development and Assistance Act of 1954—popularly known as Public Law 480—local currencies generated from the sale of surplus agricultural commodities are

spot survey of his foreign plant site, negotiate personally with his foreign partner, if any, and discuss his project with appropriate foreign government officials. You can save time and money, however, by utilizing the wealth of information available to you through the Bureau of Foreign Commerce before leaving the United States.

The Bureau of Foreign Commerce or any of the Commerce Department's 33 field offices located in industrial centers throughout the United States, can answer many of your problems by providing you with the latest available information on economic conditions abroad. Also, such things as taxation, import and exchange controls, basic data on the economy of a particular country, information of labor, utilities and power, and a variety of other specifics you need to know before establishing a business

abroad.

These lists will serve a two-fold purpose: Not only will you be able to select a number of firms which might be capable of undertaking a joint venture operation and/or entering into a licensing agreement with you, the trade lists will also serve to pinpoint your competition.

Once you have selected those firms which you feel are suitable for your needs, you may obtain from the Bureau a world trade directory report on

organizations, as do the major Latin American nations. Further, certain research organizations in the U. S. maintain overseas correspondents.

Another point of importance is that apart from the peculiar conditions existing in various foreign countries which must be contended with on an individual basis, many basic site selection factors are the same everywhere. Since this is true, the Site Selection Handbook and Plant Location Guide, published annually by I.D., can be

petroleum investment in the Middle East.

Most of the direct private investment in manufacturing, the study showed further, has been made in economically advanced countries, rather than in under-industrialized economies. The primary attraction for such investment appears to be the ready existence of a sizeable local market for manufactured products, together with the prospect of a growing market and attractive conditions for the foreign investor.

Total U. S. aid abroad since World War II has reached \$67 billion, and it is expected that this will continue at the rate of about \$4 billion annually. The economic improvement world-wide that has resulted, and will continue to result, from that program argues well for the whole international outlook. To the global minded plant builder, the invitation is obvious.

The Big Picture

In subsequent pages of this report, general areas as well as specific nations in various parts of the world will be considered from the standpoint of their development possibilities.

Activities in Puerto Rico and Canada will not be treated here, however. In the case of Puerto Rico, the potential there is such that a 32 page section beginning on page 17 of this magazine is devoted to Puerto Rican plant location factors. A similar comprehensive report on Canada is scheduled for the August, 1959, issue of INDUSTRIAL DEVELOPMENT AND MANUFACTURERS RECORD.

Latin America

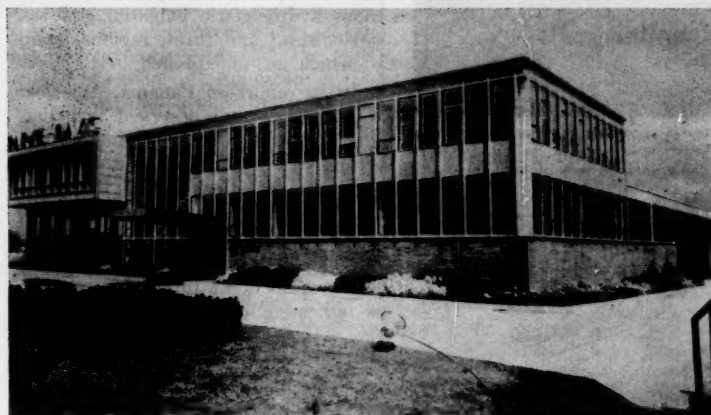
Although new areas for expansion of industry abroad are constantly being opened up, the Latin American countries still have perhaps a bit of an edge in holding the interest of the industrial investor in the United States.

The United Nations' Economic Survey of Latin America confirms that the area is literally the world's fastest growing market. Population continues its growth at twice the world rate, and if this rate is maintained into the future, by 1975 the Latin American market will have one third again as many people as the United States.

Examples of Interest

A good example of the extent to which U. S. business is interested in Latin American countries may be seen

TO SOUTH AMERICA



The Willlys-Overland do Brazil plant at Sao Paulo manufactures Jeeps and Jeep Station Wagons. This recently established, modern facility has over 300,000 square feet and employs 1400 people. Vehicles of various kinds are a good example of the type of product which can usually be manufactured more economically within its market area. Officials report that it now has an annual capacity of 15,000 vehicles.

each individual firm which will give you basic background on its organization, volume of business, commercial reputation and so on.

After you have digested the information available from the Bureau of Foreign Commerce, the Bureau will alert the American Foreign Service of your interests and your travel plans in order that the American Embassy or Consulate at your point of destination will be prepared to assist you further in making appointments with the businessmen and government officials you want to see.

In addition to the information and help you can receive from Federal Government agencies, data can also be obtained from American banks with overseas operations, and from numerous private firms having interests abroad. Western European countries also maintain economic or-

extremely helpful in deciding on actual sites in foreign locations as well as in any American area.

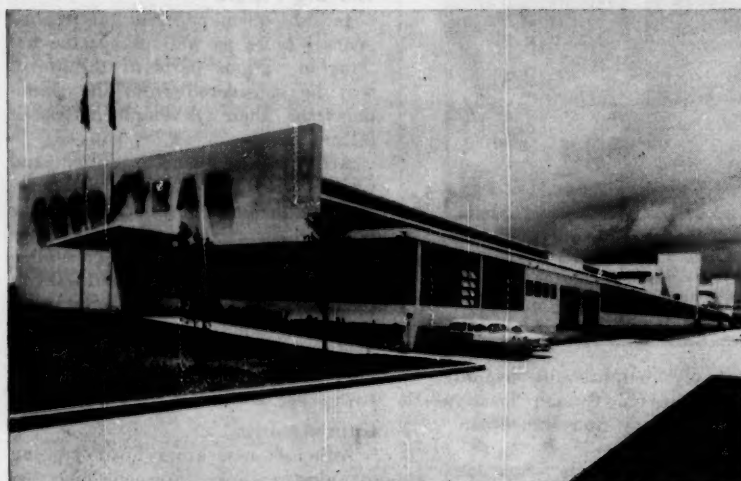
Foreign Investments

Concerning total investments that already have been made in all foreign countries, the U. S. Department of Commerce estimates that companies in the United States have about \$28 billion invested directly in foreign branches, subsidiaries and affiliates. This estimate is considered to be conservative.

The results of a study made by Stanford Research Institute show that distribution of United States private international investment is heavily weighted toward Canada, Europe and Latin America. Other parts of the world have received relatively little U. S. private investment, and much of this has been concentrated in



The new Reynolds Metals plant (above) in Manila manufactures aluminum sheet and foil for Pacific markets. This unusual photo was taken while a vivid rainbow was present in the sky, framing this modern facility. Many U. S. firms are eyeing the Philippines for new plants to serve the Orient and South Pacific.



Recently established to serve South American industrial and consumer markets, this modern tire and tube factory in Venezuela was built by the Goodyear Tire and Rubber Company. Development of South American plant facilities has created many new opportunities, opened new markets and upgraded much South American economy.

in the instance of Mexico. According to figures compiled by American & Foreign Power Company, Inc., direct U. S. investment in that country has reached about \$700 million.

Tax concessions may be granted by the Mexican government for new or necessary industries. Qualified industries are eligible for exemptions and reductions of up to 10 years with respect to certain particular levies. Concessions also may be granted by state taxing authorities.

In Guatemala official steps that have

been taken since 1954 indicate that the government maintains a favorable attitude toward the investment of foreign capital in that country.

As a result of these factors, there is currently in Guatemala a backlog of investment opportunities, and new opportunities undoubtedly will develop from the improvement in basic transportation and power facilities which is now in progress with the help of private capital from abroad and public funds.

Aside from a relatively minor an-

nual franchise tax on branches of foreign companies, taxation in Guatemala is applied without discrimination to foreign and domestic enterprises. This means that the foreign investor is at no disadvantage in relation to the domestic enterprise.

Only slightly less than one half of the total area of South America is occupied by Brazil which is the fourth largest country in the world. The American & Foreign Power report on that nation notes that its potential natural resources are so great that no really accurate estimate has ever been made. Included among Brazil's riches are varied mineral deposits, an enormous hydroelectric potential and vast agricultural and forest regions, many of which are unexploited.

In its report on Panama, American & Foreign Power observed that Panama's advantages for productive new enterprises or for establishing subsidiary corporations make it one of the most desirable countries in the dollar for investment.

Panama's wholehearted support and encouragement of foreign investments is indicated in the Investment Incentive Act of February, 1957. It states that the government "will encourage the investment of private capital in the exploitation of natural resources, agricultural activities, cattle raising, fisheries and in profitable industries."

In Chile the government has taken action, through a Foreign Investment Law, to stimulate development in the mineral, agricultural, forestry and transportation fields.

Under the terms of this law, as it has been amended, new capital may be brought into the country from foreign sources in the form of exchange, equipment or raw materials.

Interest and profits derived from such capital may be remitted freely for a period of 10 years—which in certain cases may be extended another 10 years—and the original capital repatriated at any time after five years in annual installments not exceeding 20 per cent of the original value—at the free banking rate.

With respect to new and essential industries, profits are exempt from any new taxes that may be imposed during the 10-year period.

Concerning Ecuador, American & Foreign Power comments that the government development plans, the flourishing and diversified interna-

tional trade, the long record of stability of Ecuador's currency, the expanding domestic market, and the very favorable attitude of the government toward foreign capital have created a favorable climate for investment in agriculture, manufacturing, commerce, forest products and mining.

It may be seen, then, from the examples cited here, that the countries of Latin America are generally favorable to industry brought in from abroad and that many of them are making efforts and concessions to lure investment from outside.

The "Common Market"

Among the other areas of the world that are currently attracting the particular attention of American plant builders is the group of countries which have organized into an entity called the European Economic Community, generally known as the Common Market.

When this six-nation agreement became effective on January 1, it literally marked the beginning of a new era for the 162 million citizens of France, the Federal Republic of Germany, Italy, Holland, Belgium and Luxembourg. It has also paved the way for making those countries far more interesting to investors.

Primary aims of this economic bloc are to (1) remove tariff barriers between member nations; (2) introduce uniform import duties for goods entering Common Market countries; (3) facilitate exchange of labor between member countries; (4) adjust wage levels, fringe benefits and social security conditions; (5) make all currencies freely convertible and (6) to increase the standard of living of the population by stimulating production of consumer goods.

It has been predicted that exports from the United States of capital goods and raw materials to the Common Market countries may increase by 50 per cent within the next decade. Thus the prosperity and well being of West Europe will intensify reciprocal trade for the benefit of both that area and the United States.

From the standpoint of attracting the American investor, it seems obvious that one big market is more active than six separate ones. Any arrangement facilitating trade within a greater area can only be an advantage.

growing opportunities for industry in modern **BRAZIL**



Gross national product soaring with 79% increase since World War II. \$277 million for roads in '58 opening new sites for practical investments.



Heavy industry developing fast. 1,454,500 tons in steel ingots were produced in '57, almost 2,000,000 forecast for '59.



Rapid population growth estimated to reach 100 million in 20 years creates expanding consumer markets, favorable labor supply.

Brazil is taking positive steps in developing its industrial potential, agricultural production and natural resources. Here in the fifth largest country in the world—almost as large as the United States, including Alaska—a "nation of the future" is quickly transforming itself into a nation of the present.

To keep pace with growing Brazil, the 10 investor-owned electric companies in the *Empresas Elétricas* group have engaged in a \$250 million expansion program to double capacity by 1963.

IT'S SOUND BUSINESS to put Brazil in your plans for growth, too. For your copy of a booklet giving particulars on opportunities for investment in Brazil, write the Area Development departments of *Cia. Auxiliar de Empresas Elétricas* at the address below or American & Foreign Power Company Inc., 100 Church Street, New York 7, N. Y.



Companhia Auxiliar de *Empresas Elétricas Brasileiras*

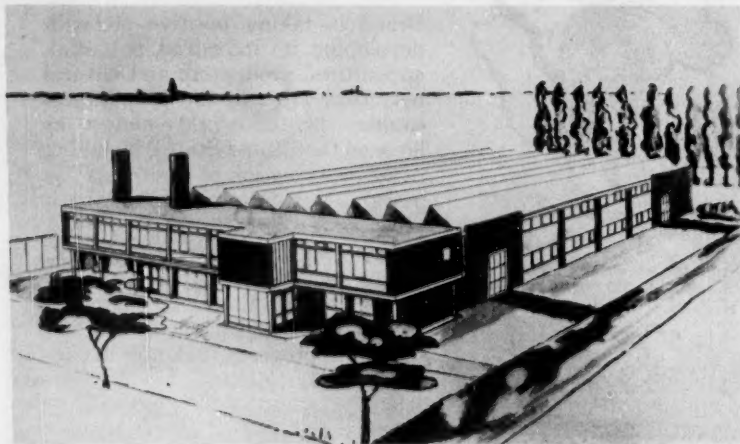
and Affiliated Electric Companies

AVENIDA RIO BRANCO, 135—RIO DE JANEIRO, BRAZIL

ASSOCIATED WITH THE AMERICAN & FOREIGN POWER SYSTEM



Discussing market and product development opportunities in Ireland for the American Can Company are, (left to right) Joseph F. Shields, Irish Consul in Boston, Gerald W. Blakely, Jr., Vice President, Cabot, Cabot & Forbes Co., Hon. William Norton, Deputy Prime Minister of Ireland and Minister of Commerce and Industry, and A. L. Brunskill, Plant Manager, American Can Company, New England Industrial Center, Needham, Massachusetts.



Above is a recently released architect's sketch of Acheson Industries, Inc.'s new plant in Holland. The plant will manufacture colloidal dispersions used in lubricants, mold coating, electronics and other products. The new facility will be supervised by Acheson Colloids Limited, the firm's British affiliate. The Common Market has created demands for products which will generate many new plants in the future.

Other European Countries

Excellent progress also is being made in the Continental European nations outside the Common Market—the Scandinavian countries, Switzerland and Austria, and the still industrially underdeveloped countries of Spain, Greece, Portugal and Turkey.

In coming years many of the customs barriers between these and other nations will be removed or greatly reduced. Thus, in addition to the Common Market countries, there is almost

certain to emerge a more unified economy for all of free Europe. There will be the opportunity there to increase greatly the standards of living by lowering production costs and increasing productivity of the individual.

The United Kingdom

The United Kingdom is industrialized and protected by high tariffs, but is very closely tied in with the Commonwealth by a system of preferential tariffs. At least half of U. K. trade is with Commonwealth nations.

American plants located in the U. K. have access to the large preferential market and the opportunity to sell in the Sterling Area without currency restrictions.

The import of American machinery into the United Kingdom can be licensed if no machinery offering roughly similar advantages is available from non-dollar sources. Almost all raw materials can be imported into the U. K. from any country without restriction.

Where production requires components from the United States, imports may be licensed until arrangements have been made for an alternative source of supply to become available in the United Kingdom. Small quantities of finished products may also be imported for testing, marketing or display purposes.

An interesting development by the British Government has been the move to establish a number of new municipalities which are designed to attract new industries and to induce people to move from overcrowded and surplus labor areas to localities where there are new opportunities.

British West Indies

The British colonies also are actively seeking new manufacturing establishments. In this connection, the activities of Jamaica serve as a good example.

This island in the British West Indies is dangling such lures to industry as strategic location, easy access to Sterling markets, liberal currency convertibility, generous tax holidays, no capital gains tax, special concessions to export industries; stable, democratic government; abundant, English-speaking labor, and gracious, modern living conditions.

Situated in the Caribbean Sea 510 miles south of Miami, Jamaica is only two and a half hours flying time from Miami, less than six hours from New York and 18 hours from London.

The capital city of Kingston, site of the island's major general cargo port, has the seventh largest natural harbor in the world. Deep-water piers are capable of berthing some of the largest ocean-going vessels.

To help prospective plant builders Jamaica has an Industrial Development Corporation which has developed a fully trained and qualified staff, capable of advising the investor on

all matters relating to the establishment of industry on the island.

Possibilities in Africa

With tremendous opportunities for further development, Africa is a continent whose full mineral potential can only be guessed at. Despite the large-scale development of resources since the turn of the Century, a vast amount of mapping and geological surveying remains to be done.

It is logical that a greater part of the future impetus for Africa will come from Europe, and the continent will be the special expansion area of the older European economies. The French are interested heavily in Tunisia, Algiers, Morocco and the Sahara; the Belgians in the Congo, and the British in the East African areas and South Africa.

Evidence of intense American interest in the area may be seen in the fact that this past December a \$50 million South African loan was successfully concluded in New York. The loan consisted of a \$25 million issue of external loan bonds offered publicly by an underwriting syndicate and a World Bank loan in various currencies equivalent to \$25 million. The bond issue increased to \$65 million the principal amount of public bond issues of South Africa underwritten in the United States.

Japan's Outlook

The Japan External Trade Recovery Organization reports that Japan during this year will continue to seek new markets for high quality products and will try to develop—through loans, technical assistance and stepped-up mineral exploration—closer to home sources of raw materials.

With a population equal to half that of the United States but with roughly only one twelfth of the U. S. Gross National Product, Japan has to import more than 80 per cent of its raw materials and more than 20 per cent of its food. Currently, Japan's imports come to around \$2.5 billion, but economists predict that the figure will have to be doubled by 1965.

Case Histories

So far in this report we have a variety of factors, some general and some specific, affecting plant locations in any area outside of the United States, along with situations prevailing in individual nations or areas which were taken as examples.

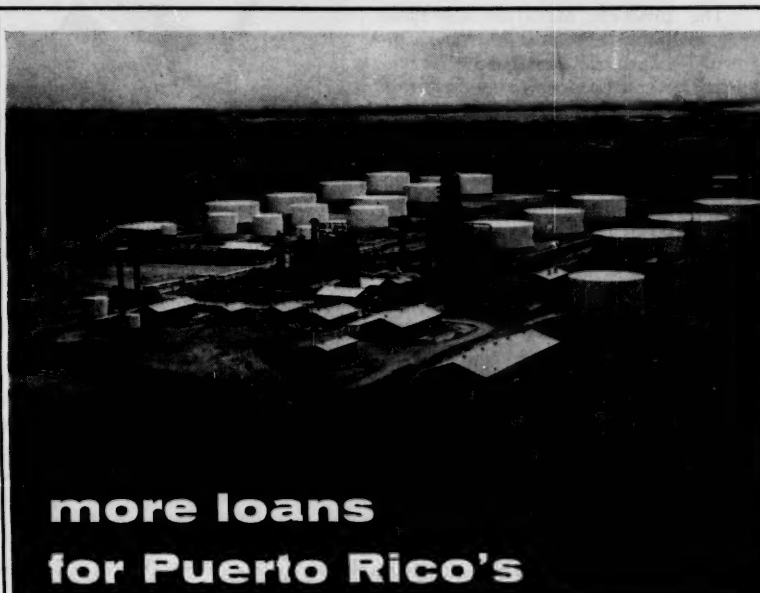
In the concluding section of the report there will be presented a series of brief case histories of companies which have located plants in foreign countries. These will serve to show you examples of the various factors which have entered into the location of certain plants in particular places.

These specific instances vary widely. In some cases the foreign plant is financed entirely by the United States company involved. In other cases the plant was built through aid from a

foreign government or is owned jointly by a U. S. and foreign firm.

Another interesting case, again in Brazil, is that of a United States firm which has expanded to keep in line with some legislation passed by that South American country to stimulate its internal economy.

Brazil has adopted a program which contemplates that by 1960 vehicles manufactured and sold there must be at least 90 per cent, by weight, of Brazilian manufacture.



more loans for Puerto Rico's growing industry

As industrialization gains momentum, the Government Development Bank for Puerto Rico is providing more loans to promote private, local manufacturing plants and businesses. The Bank's growth over the past fifteen years has brought it to a point where its activities in private lending can contribute more effectively than ever to the overall objective of stimulating capital formation in Puerto Rico.

During 1957-58, the Bank embarked on a program designed to step up lending operations. Under this program, funds for developmental loans are provided from sales of certain securities now held by the Bank, by subsequent borrowing, or by distributing a portion of the Bank's loan holdings. It is expected that the shift to a more balanced portfolio will, at the same time, provide greater income to the Bank. An increasing capital surplus will provide an additional source of funds for future use.

In launching this expanded loan program, several important policy and procedural changes were adopted this past year, including a lower scale of interest charges, extension of the loan payment period from 10 to 15 years for commercial and industrial buildings, and increased attention to fields of lending other than industrial.

As an integral part of its activities, the Bank follows a policy of alerting private capital to investment opportunities, and will be pleased to supply information on request.

**Commonwealth of Puerto Rico
GOVERNMENT DEVELOPMENT
BANK FOR PUERTO RICO**

P.O. Box 4591
San Juan, Puerto Rico
37 Wall Street
New York 5, New York

In line with this a new organization was formed, the Bendix do Brasil Equipamentos Para Autoveiculos, S. A., to manufacture automobile and truck brakes. The company is operated as a jointly-owned enterprise of Bendix Aviation and the Bendix-Westinghouse Automotive Air Brake Company. Its new plant, which has 165,000 square feet of floor space, is about 65 miles northwest of Sao Paulo, largest city in Brazil and its most important industrial center.

The products manufactured there are available not only to American-owned plants in Brazil but also to Brazilian and European manufacturers of commercial and passenger vehicles.

The B. F. Goodrich Company, getting set to supply Brazilian-made tires to the vehicles made there is building a new plant in the State of Sao Paulo. It is scheduled for completion in late 1959. The plant will produce tires, tubes, plastics, and industrial rubber products for the automotive industry and for the replacement market. Officials of Goodrich said the decision to build a plant in Brazil "reflects our confidence in the continuing growth of that country and of Latin America."

In Cuba, which is now under a completely new government following the recent revolution, the situation is still somewhat uncertain but industrial development activities are continuing nevertheless.

Freeport Nickel Company, for instance, which had begun construction of a new plant in Cuba prior to the revolution, is proceeding with the building of the facility there. The project, to cost a total of \$119 million, has two parts: Mining and ore concentrating facilities in Cuba and a refinery at Port Nickel, Louisiana.

Factors influencing the location of a plant in Mexico by Hercules Powder Company included availability of raw materials and financial aid from the government.

Hercules entered the wood naval stores industry in Mexico through the acquisition of stock in Corbu Industrial, S. A., a Mexican corporation. Following this the company built a plant near Ciudad Hidalgo, Michoacan, which manufactures 25 million pounds of wood naval stores products annually.

The venture was planned with the assistance of Nacional Financiera, a



E. E. Schnellbacher is Director, Office of Trade Promotion, U. S. Department of Commerce in Washington. His office acts as a clearing house of information on plant development opportunities abroad. Many reports are available at nominal cost detailing important location factors in all areas of the free world.

government sponsored agency for financing new Mexican industries. The wood stump removal and utilization program is being carried out by Corbu in the State of Michoacan. In this area thousands of acres of cut-over woodland are available for stump removal.

Providing employment for approximately 1,000 men, the enterprise produces rosin, turpentine, pine oil and other terpene chemicals both for Mexican industry and for export.

A plant expansion in England by American Motors Corporation's Kelvinator Division was prompted by direct aid from the British government and the company's desire to further strengthen its position in the international market.

The plant to produce Kelvinator appliances was built by the government near Liverpool and represented a total investment of approximately \$2.8 million. At the time of its completion last year, the 320,000-square-foot facility was the largest factory the British government had ever constructed for lease to private industry. The government owns an adjacent 14 acres of land which can be used for expansion.

A big expansion in The Netherlands by Esso Nederland N. V. has come

about as the result of, again, a growing market. When completed in 1960, the new \$50 million refinery in Rotterdam will have a capacity of some 95,000 barrels a day.

Officials noted that the power requirements — demand for gasoline, diesel oil and fuel oil—had increased in The Netherlands on an average of 11 per cent annually for the past decade.

The 425-acre site for the new refinery is located strategically between two arms of the Third Petroleum Harbor, and its carefully laid out plot contains ample storage areas for both crude and refined products, plus room for future expansion. In addition, the refinery will have a mile of modern waterfront facilities.

Recently opened in Coleraine, Northern Ireland is a new \$9.8 million acrilan acrylic fiber plant of Chemstrand, Ltd., foreign subsidiary of the Chemstrand Corporation, Decatur, Alabama.

Chemstrand selected the site at Coleraine after looking at 61 other possible locations throughout the United Kingdom. Officials noted that by locating in the U. K., Chemstrand could tap the sterling area markets as well as those on the Continent. In picking the exact site, the decision was based upon a detailed assessment of costs per pound of fiber. Factors such as labor availability, services, housing, schools and recreational facilities also were a strong influence.

Indonesian Development

Perhaps one of the most outstanding examples of a U. S. company persevering against tremendous odds in a foreign development is the case of the American Oil Company's experience in Indonesia.

The Indonesian operation is conducted by Standard-Vacuum Oil Company, an integrated oil enterprise operating exclusively in the Eastern Hemisphere.

One of the most significant accomplishments has been STANVAC's opening of new areas for settlement through its searches for oil and development of oil fields, as much of the work has been carried out in previously uninhabited jungle areas in which the company constructed roads, strung telephone lines and erected company installations.

So far, STANVAC has met and overcome such obstacles as years of fruit-

less search for oil, redevelopment of its holdings after wartime destruction followed by revolution, and uncertainties about the new Republic of Indonesia's policies toward foreign-owned enterprise.

A study of this situation, made by the National Planning Association, observes: "Companies such as STANVAC, identifying their long-run profitability with the long-run economic and social development of the countries in which they operate, provide technical and capital assistance while adapting to the requisite cultural and political environments."

Information Sources

In addition to the various and extensive publications and special information provided by the Foreign Commerce Department of the U. S. Department of Commerce, the U. S. executive interested in plant investments overseas can also get aid and advice from many other sources.

As is true in the United States, the utilities organizations are ready and able to supply a great deal of help with plant location data in the particular areas where they operate.

American & Foreign Power Company, Inc., for example, has an Area

Development Section which, in conjunction with its associated companies in Latin America, will welcome inquiries concerning plant location in any of the countries served by the system and will render any assistance necessary in the development of specific projects in Brazil, Chile, Ecuador, Columbia, Costa Rica, Cuba, Guatemala, Mexico and Panama. With headquarters at 100 Church Street, New York 7, N. Y., American & Foreign Power has available on request booklets and other information on these countries.

Another private industry source of aid is Pan American World Airways System. Pan Am's planes serve 79 lands around the world, and the system, with its affiliates, has 926 offices. Pan Am is often queried by business men on conditions and expansion potentials in other countries and is glad to cooperate.

Requests to Pan Am should be directed either to the system's local district sales manager or to the Director-Sales, Pan American, Chrysler Building, New York 17, N. Y.

Helpful advice is available, too from Hilton Hotels International, the Waldorf-Astoria, New York 22, N. Y.

This organization which has located, and is continuing to locate, hotels in many foreign countries, has encountered and overcome a great variety of site selection and location problems in connection with these activities.

Among other organizations which have made special studies of and have reports available on various aspects of foreign development are:

National Planning Association, 1606 New Hampshire Avenue, N.W., Washington 9, D. C.

Public Affairs Press, 419 New Jersey Avenue, S.E., Washington 8.

American Management Association, Inc., 1515 Broadway, Times Square, New York 16.

International Industrial Development Center, Stanford Research Institute, Menlo Park, California.

The American Tariff League, Inc., 19 West 44th Street, New York 36.

International Management Association (affiliate of AMA), 1515 Broadway, Times Square, New York 16.

Gulf Oil Corporation, Box 1166, Pittsburgh 30, Pennsylvania.

Bureau of Business Research, School of Business, Indiana University, Bloomington, Indiana.

PORTO RICO IRON WORKS, INC.

ENGINEERS • FOUNDERS • MECHANICS • MERCHANTS

ALWAYS ON HAND TO SERVE YOUR PLANNING, ERECTION AND PRODUCTION NEEDS

ENGINEERING AND PLANNING: Qualified engineering staff for designing, planning and supervising plants and buildings. — PRODUCTION FACILITIES: Structural steel shop; pressure and atmospheric vessels; miscellaneous plate and steel; meehanite foundry; machine shop. — TYPES OF PRODUCTS: steel structures for truss-type and rigid frame buildings—towers, platforms and bridges—miscellaneous steel product—storage tanks for liquids—pressure vessels ASME Code—meehanite castings—finished machine parts. — WAREHOUSE (MILL SUPPLIES): pipe (black, galvanized, E-H); tubes (boiler, copper, bronze, brass); CRANE pipe fittings and valves (100 lbs. to 300 lbs. steam pressure); structural steel shapes, plates, bars; special alloy steel shafting; tool steel; copper screens; monel metal screens; C-P pneumatic tools, spares, hose; HOBART welding rods; GOODRICH's packing, hose, belting, rubber products, etc.

MANUFACTURERS' REPRESENTATIVES: ALLIS CHALMERS MFG. COMPANY—motors, pumps, crushers, generators, tractors, fork-lift trucks, power units; BRISTOL COMPANY—recording instruments; BUELL ENGINEERING—dust collectors; CHICAGO PNEUMATIC TOOL CO.—compressors & pneumatic tools; CINCINNATI LATHE & TOOL CO.—industrial machinery; CLIPPER MFG. COMPANY—masonry saws & blades; COMBUSTION ENGINEERING INC.—boilers; M. H. DETRICK CO.—refractory tiles; EDWARDS ENGINEERING CORP.—hydraulic accumulators; EIMCO CORPORATION—sugar mud filters; FULTON IRON WORKS CO.—sugar mills; GRAVER TANK & MFG. CO.—clarifiers & tanks; GREEN FUEL ECONOMIZER CO.—induced & forced draft fans; HEPWORTH MACHINE CO., INC.—centrifugals; HOBART BROTHERS CO.—arc welding equipment; JOHNSTON PUMP CO.—deepwell pumps; W. W. SLY MFG. CO.—dust filters; STEPHENS ADAMSON MFG. CO.—bulk material handling systems; TEC—trailers & semi-trailers; TIMKEN ROLLER BEARING CO.—rock bits; THOMSON MACHINERY CO.—wheel tractors, cane loaders and harvesters; WHITE MOTOR COMPANY—trucks, truck-tractors.

PORTO RICO IRON WORKS, INC.

Main Office—Ponce, Puerto Rico

San Juan Office—Box 992, San Juan, Puerto Rico

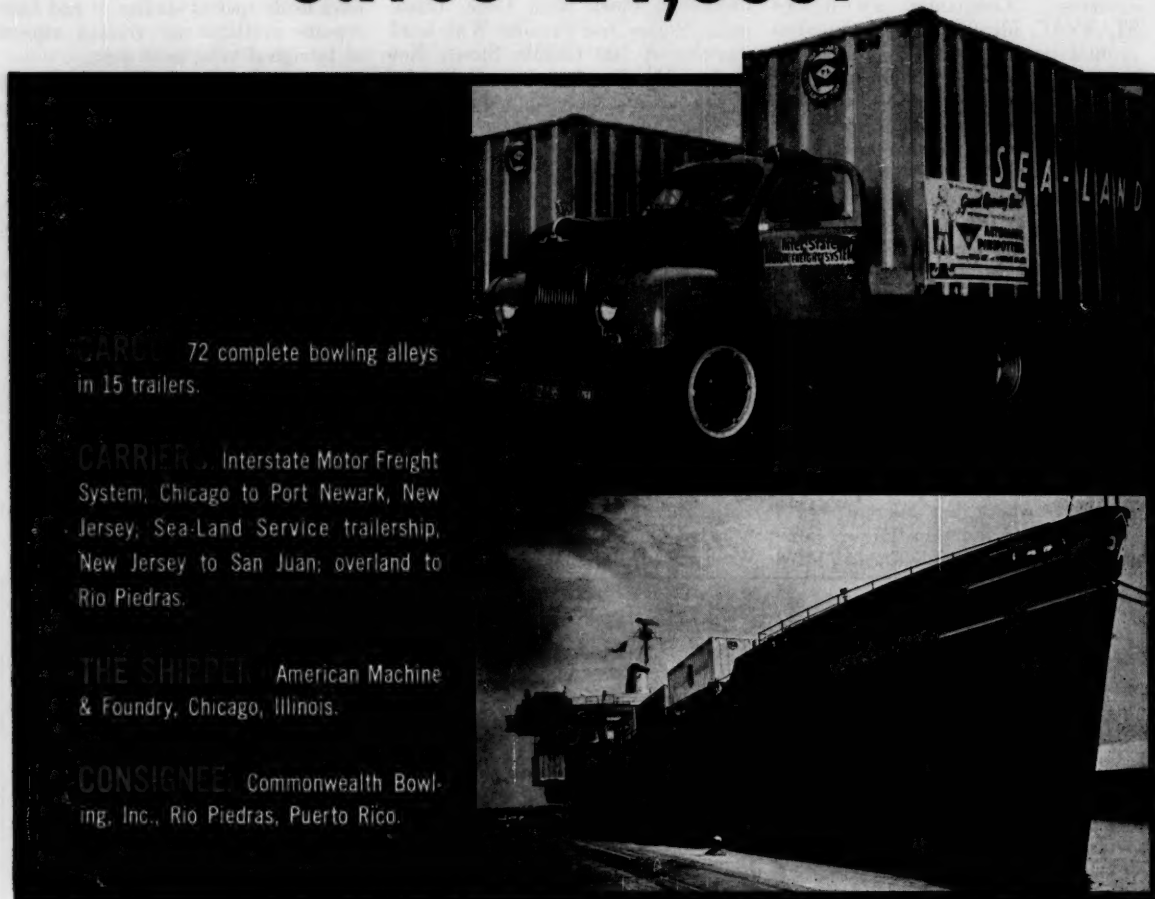
New York Office—61 Broadway, N. Y.

Miami Office—Pan American Bank Bldg., Miami, Fla.

¡A SUS ORDENES, AMIGO!

Direct Shipment to Puerto Rico

Saves \$24,000!



CARGO: 72 complete bowling alleys in 15 trailers.

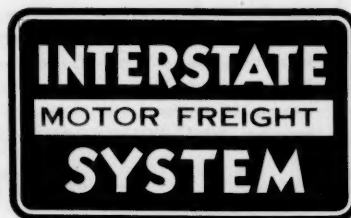
CARRIER: Interstate Motor Freight System, Chicago to Port Newark, New Jersey; Sea-Land Service trailership, New Jersey to San Juan; overland to Rio Piedras.

THE SHIPPER: American Machine & Foundry, Chicago, Illinois.

CONSIGNEE: Commonwealth Bowling, Inc., Rio Piedras, Puerto Rico.

SAVINGS: AMF saved the consignee \$24,000 by specifying Interstate System and Sea-Land Service. The trailer-load cargo was handled only once. It was sealed against pilferage, protected from damage, picked up and delivered without needless in-port delays. No special export packaging, no loading charge at the port of exit, no special premium for the service.

MORAL: For swift, safe, economical service — ship Interstate. All 66 terminals in Interstate System's 26-state operating authority have the facilities to handle direct shipments to and from Puerto Rico in conjunction with Pan-Atlantic Steamship Corporation's Sea-Land Service. Less truckload as well as truckload service. Vans, open top and mechanically refrigerated trailers are available. For complete information, including rates and schedules, call your local Interstate representative. He's listed in the Yellow Pages.



Grand Rapids, Michigan

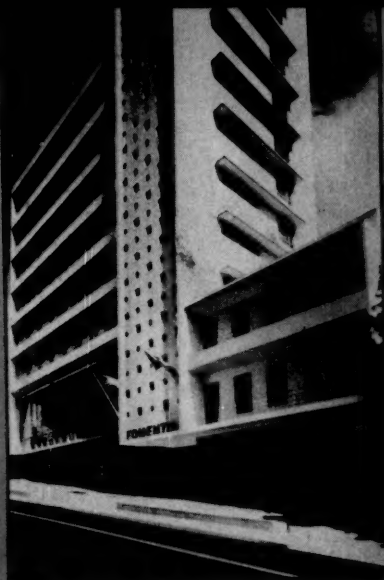
MORE THAN A TRUCK LINE... A TRANSPORTATION SYSTEM

AN AREA SURVEY by

Land Development
and manufacturers council

THE NATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION

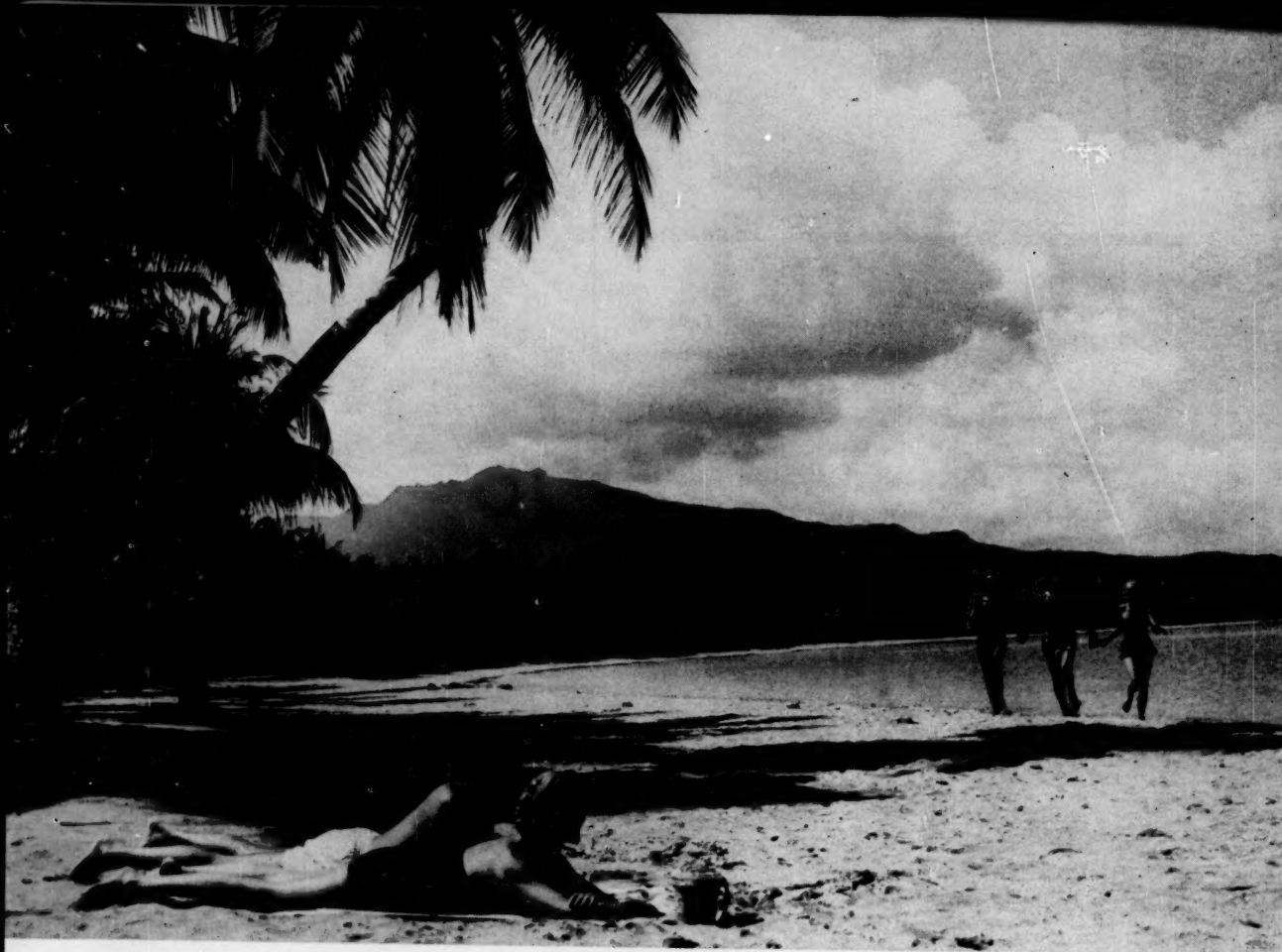
Complete exemption from all Federal,
state and local taxes—
wage rates at 40 percent of U. S. levels—
and the lure of a tropical island basking
in the sun the year 'round—these are some
of the factors behind a remarkable
industrial expansion story which may spell
opportunity for your firm in . . .



Puerto Rico

a new horizon for industry





By H. McKinley Conway, Jr

IT'S TIME TO LOOK AT

According to ID's editor, the "Fomento" plan of the Commonwealth of Puerto Rico is one of the outstanding area development programs in the world today. Here's his report on a first-hand survey of plant location factors.

SAN JUAN, PUERTO RICO. Who says plant location isn't glamorous?

It just depends on your viewpoint. Sitting here on a sixth floor balcony of the sleek Caribe Hilton you're inclined to be broadminded.

The radio says it's seven below zero in Chicago but here it's a balmy eighty-three, with just enough breeze drifting in off the blue South Atlantic to keep the palms waving cheerfully. In the foreground sun bathers cluster around the colorful pool and cabana area, and in the lagoon back of the breakwater a few swimmers splash lazily off the beach.

Farther out, foaming white breakers smash at the remains of an old Spanish fort. And out to sea a freighter makes its way along the routes of the southern trade winds.

No, industrial development isn't always a succession of surveys of vacant lots on the wrong side of the tracks. In fact, looking for new locations can be more than pleasant.

That's what hundreds of U. S. executives have already discovered here. If you haven't yet taken a look at Puerto Rico for your company, now is the time. And maybe this editorial survey will provide a convenient introduction.

Few business men in the U. S. are aware of the precise nature of our re-

lationship with Puerto Rico. Some undoubtedly think Puerto Rico is still a territory, having the same status as Hawaii. Others are under the mistaken impression it has become independent, as in the case of the Philippines. And still others are laboring under the misapprehension that Puerto Rico is bent upon becoming a state as did Alaska.

Actually, none of these situations fit Puerto Rico, which has worked out an arrangement which is probably unique in American political history. In fact, Puerto Rico is something new and different.

"Free Associated State"

The Commonwealth is an invention of Governor Munoz Marin and his popular Democratic party. Two decades ago they came onto the political scene when most people both in Puerto Rico and in the U.S.A. felt there were only two directions in which Puerto Rico could move.

One school of thought was that Puerto Rico must inevitably move towards independence. The other school thought that the logical course was statehood.

But the Munoz group thought there might be still another alternative and they came up with the imaginative plan

for a "free federated state." Governor Munoz expresses his feelings about the various alternatives as follows.

"I do not believe in statehood . . . it would result in establishing a priority by the government of the U. S. as against the elected government of Puerto Rico and the imposition of taxes, thereby impairing considerably the liberty of the people of Puerto Rico. In addition, as an associated but culturally and administratively different entity, Puerto Rico serves itself better and also serves the United States better in achieving the understanding which it needs and deserves."

Governor Munoz expresses similar opposition to separate independence, stating "It would destroy all the potential of the economic growth of Puerto Rico; it would reduce our standard of living; it would end our freedom to move and work in any part of the United States; and it would constitute a narrow principal of isolation contrary to the best interests of human liberty in our time." Governor Munoz asserts positively "I believe in the Commonwealth. It provides our people with more political liberty than federated statehood; it insures far more economic freedom than separate independence; it sets free our cultural personality and our means of enriching that personality; it is based on the dignity of a com-

PUERTO RICO

pact freely agreed to; and our civilization will continue to grow in all its aspects, politically, economically, socially, and culturally within that principal of compact."

The compact to which Governor Munoz refers is simply an agreement between the government of Puerto Rico and the congress of the United States. While it is subject to change the thinking here is that the arrangement is permanent and will remain relatively as is for an indefinite period.

The terms of the compact, technically termed the Federal Relations Act, provide for (a) common citizenship, (b) a common monetary system, (c) free trade, (d) non-payment of taxes into the Federal treasury by Puerto Ricans, (e) the enforcement in Puerto Rico of the applicable provisions of the Federal Constitution, (f) the enforcement in Puerto Rico of Federal laws except for tax and other inapplicable statutes.

It is on the basis of these distinctions that Puerto Rico is not required to pay Federal taxes. Governor Munoz says "In the sense in which our real relationship with the United States is of a fraternal character we are part of the family but in the sense in which congress and the courts have made the distinction, Puerto Rico is not."

The party now in power (the Popular Democratic Party) has won every election, with increasing majorities, since it first gained control of the legislature in 1940. It first won on a platform of more jobs and higher incomes, and its position is solidly in favor of continued association with the United States, as is also that of the Statehood (Republican) Party. The minority Independence Party, with 19 percent of the vote (not to be confused with the outlawed Nationalist Party, a tiny lunatic fringe) put its trust in the ballot box as the means to gain its objective.

All parties are agreed on the need for industrialization to meet the island's serious economic problem. Relations between the legislative and executive branches of the government are unusually harmonious — the executive budget is seldom cut in any major particular by the Legislature. There is deep respect, even among his political opponents, for Governor Munoz, and government officials appear to be thoroughly honest and competent.

People who are not familiar with Puerto Rico's history and politics, but who are acquainted with the Latin

American scene, are likely to be apprehensive about the island's political stability. Actually the earliest settled area now within the Union has never had a revolution. Discussing the political situation, one astute observer said "the situation is stable and will get more so."

This is significant to the site-seeker because it provides assurance that commitments made today will be kept tomorrow. Actually, there has been more continuity of policy in Puerto Rico in the past decade than has been found in most of the states.

The Fomento Program

And nowhere has this continuity been more evident than in the realm of industrial development. For more than a decade the Commonwealth has moved steadily to establish what, by any yardstick, is one of the most outstanding promotional and development efforts in the world today.

This program, called "Operation Bootstrap" by Governor Munoz, and "Fomento" (meaning, literally, to ferment) by the people, is a classic in area development. Already, businessmen and government officials have come from all over the world to study the program and see its results.

The program is classical in several respects. First, it is an area promotion project which deals with a geographic unit which is clearly defined. The "test area" is sufficiently isolated statistically so that cause-and-effect relationships may be seen much more clearly than is usually the case. Second, the program has moved so swiftly that

the normal time scale has been greatly compressed. The student of area development can see here changes in a few years which elsewhere might require a generation.

This does not mean that progress has been easy. Perhaps the greatest lesson to be learned here is that a people can lift themselves out of an economic rut despite odds which at the outset may seem overwhelming.

Prior to World War II, Puerto Rico wallowed in poverty. The squalor in slum areas was a blot on the conscience of the American people. Everyone agreed that something had to be done.

And, fortunately, a handful of men had some sound ideas as to how the situation should be attacked. One of these was young Teodoro Moscoso, son of a wholesale druggist in Ponce on the South Coast.

Educated in Philadelphia and at the University of Michigan, Moscoso had attracted attention as an unpaid official of the public housing authority in Ponce. It was this taste of public service which encouraged him to accept Governor Munoz's invitation to manage the Fomento program when it was launched, without fanfare, in 1942.

Official start of the program was the creation that year of Pridco — the Puerto Rico Industrial Development Company which, at the start, boasted two employees and a borrowed typewriter for each. But Pridco, still a vital unit in the Fomento effort, got busy immediately and had succeeded in getting four industrial plants in operation before the war ended.

The tax incentive program and promotional campaign was gradually stepped up after World War II and in 1950 the government created the Economic Development Administration to give overall direction to the expanded industrialization program. EDA and its subsidiaries today provide a wide range of services, from factory construction and financing to the provision of vocational training and the installation of telephones. Now, the EDA has a staff of some 300 people situated in offices here and in several major U.S. cities. The organization chart reveals careful planning to develop services you need in planning the expansion of your facilities in Puerto Rico.

In fact, these services are so extensive and so useful to you that they deserve detailed discussion. First, it is important to know that the EDA administrator



Governor Munoz Marin has made industrial development the key plank in his platform which has been endorsed overwhelmingly by the people of Puerto Rico.

Teodoro Moscoso is a capable man who has been given adequate authority to get his job done. He has been in office for 15 years and is regarded as being above politics.

Among his duties Moscoso serves as the executive head of Pridco and also wields influence over the Ports Authority. His department heads include specialists in economic research, finance, and public relations.

The Industrial Development Branch with five key departments, is a very vital part of the EDA effort. These activities include industrial promotion, the development of Puerto Rican industries internally, services to industry, industrial research, and commercial development. The industrial services department will help you get established here and get your plant in operation.

Heading the Development Branch is young Heriberto Alonso,

Should you visit the island to look into opportunities, he will happily assign to you a hand-picked aide who will be dedicated to making your stay worthwhile. Your assistant will be bilingual, probably educated in the states, and especially well-informed about location factors.

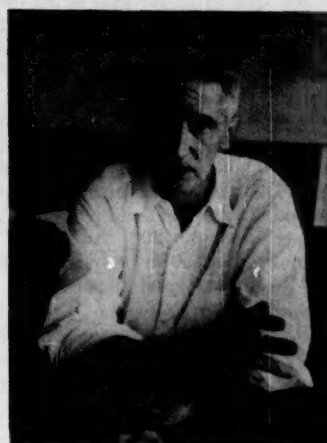
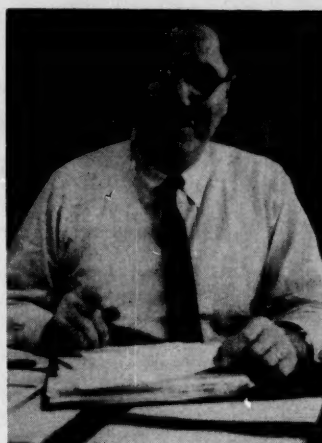
If you should decide to establish a unit here, the same group will work directly with you in getting you settled. They'll arrange utility connections, housing, and other services you need. Too, they'll orient you on local laws and customs.

More than one such aide has been employed by an incoming plant, because his services proved so valuable during the transitional period. Moscoso admits he doesn't mind being "robbed" of personnel because it speaks well for the training and experience provided in the Fomento operation.

Another important EDA unit is the Office of Economic Research which engages in basic research on the feasibility of new industrial operations in Puerto Rico and provides data for use by government agencies as well as private firms. Director Hu Barton has a staff of some 40 specialists.

The general economics division within OER is responsible for analyses of past results and future targets of EDA programs. The industrial economics division studies conditions in existing industries, analyzes potential industrial complexes and determines opportunities for new operations on the island.

The department of industrial research is the scientific arm of Fomento and



Shirt Sleeve "Fomenters"

Without question one of the key factors in the success of the Fomento program is the caliber and devotion to duty of EDA personnel. Administrator Teodoro Moscoso (upper left) has given the undertaking dynamic leadership since its origin. He has placed competent men like Hu Barton (upper right) at the head of important departments and he has brought in specialists (below) to handle plant construction programs. This is a shirt sleeve and sport shirt outfit whose ardor would do credit to a door-to-door selling force. Questioned about the type of people selected for his San Juan promotion staff, Heriberto Alonso says he looks for men with a "missionary zeal" to improve conditions in their homeland.



actually operates research and testing facilities. One of its projects is the development of industrial processes for the economic use of local raw materials such as sugar molasses and bagasse.

The commercial development department promotes the establishment of food processing and storage facilities, warehouses and wholesale and retail outlets. They have been instrumental in the establishment of ten supermarkets and approximately 200 "superettes" which now do about 10 per cent of the Puerto Rican retail food business.

In addition to all of these departments EDA has a bustling department of tourism which promotes vacation travel to the island. This department also handles the establishment and development of hotels, restaurants and other tourist facilities. Among its achievements are hotels built by Pridco such as Caribe Hilton and La Concha.

For your convenience EDA has a large continental operations branch headquartered in New York, and with branch offices in Chicago, Los Angeles and Miami. Within the continental branch are departments such as industrial development, information, marketing, tourism, and rum promotion.

Executive Director of Continental operations is Rafael Durand, with experience in planning and management. Durand holds a Masters Degree from Boston University, with emphasis on political economics.

Perhaps the most important subsidiary of EDA is Pridco which is essentially a real estate and specialized financing company. This public corporation engages in the purchase, subdivision, lease and sale of land and in the construction, lease and sale of plant buildings, hotels, commercial establishments and other facilities.

The Pridco engineering staff offers consulting aid and in fact can arrange a complete "package deal." While Pridco has constructed many buildings to meet special requirements the plan generally involves the construction of general purpose factory buildings suitable for a variety of uses.

In anticipation of future needs Pridco acquires land for sites and erects buildings on a speculative basis. During the past year there have been some 50 buildings either under construction or ready for occupancy — thus guaranteeing that you can move in as soon as you are ready.

As a part of the work of its development branch Pridco has developed a



If you should visit Puerto Rico, EDA will be happy to assign a competent "guide" to show plant sites and discuss location factors. An example is Miguel Juan, VPI-educated representative of the industrial development branch.

master plan of physical facilities for industrial growth on the island through 1975. This plan, which anticipates a per family income of \$2,000 a year involves the creation of 2,500 new plants with 200,000 new jobs. The total public and private investment would be \$1.4 billion.

While this goal seems ambitious, Pridco has a reputation for getting things done and certainly the establishment of the goal indicates a boldness of thinking which is essential.

Another subsidiary of EDA is the Puerto Rican Ports Authority which is responsible for the ports and docks, airport facilities, and buses. These facilities include 7 marine terminals in San Juan, the San Juan international airport, and the San Juan metropolitan bus system.

These are by no means the only activities included in the overall Fomento effort, but they serve to reveal its scope. If you find the pattern of interlocking and coordinated agencies confusing, don't let it bother you. All you need to do to get prompt service on any site matter is to contact EDA's office in New York at 666 Fifth Ave. The organization will do the rest.

Fomento Pays Off

If you should contact EDA for site information, you'll find an operation made smooth by extensive experience. Few development agencies handle such a volume and variety of industrial projects.

In fact, the manager of a chamber

of commerce or development group in a typical U.S. city would be amazed at the volume of Fomento site-surveying activities. For example, a staff of about 10 men headquartered in San Juan is kept busy just showing "prospects" around. Approximately 100 different projects were being negotiated at the time ID's editor visited Fomento offices in the Banco Popular.

EDA personnel take delight in tallying new units and there is a rather well-defined score-keeping system. A new enterprise which is established with Fomento assistance of any type is defined as "promoted." Beginning with 1946, when there were 8 Fomento-promoted plants in existence, the tally has moved swiftly upward:

| Year | Total Plants (Cumulative) |
|------|------------------------------|
| 1947 | 19 |
| 1948 | 35 |
| 1949 | 65 |
| 1950 | 96 |
| 1951 | 128 |
| 1952 | 188 |
| 1953 | 257 |
| 1954 | 280 |
| 1955 | 329 |
| 1956 | 392 |
| 1957 | 467 |
| 1958 | 530 |

While Fomento personnel tend to be conservative, it appears probable that the total will exceed 600 this year. And, in addition, there are many other expansions not tallied on this scoreboard.

Here is dramatic proof of the payoff in industrial development which should cheer developers where results are difficult or impossible to measure. In Puerto Rico it is possible to arrive at a very striking comparison between costs and returns in a large-scale development effort.

Actual statistics on government expenditures for the industrial development program and direct returns in additional income and revenue show that over the past 10 years the benefits have been 30 times the cost!

Similar studies have indicated that the tourist promotion program has yielded results 7.5 times the cost and the rum promotion campaign has brought returns 9.1 times greater than expenses for the 10 year period.

While you may not be particularly concerned with such an analysis of the Fomento effort, the success of the plan holds more than a little significance for you. You can learn a lot about the opportunities which may exist for you in Puerto Rico by looking at the record of other enterprises.

Pattern of Industrial Activity

Perhaps the most significant aspect of industrial activity in Puerto Rico is the rapidity with which its complexion is changing. Fomento has already altered the basic income pattern on the island.

During the past 8 years manufacturing net income has increased 160 per-

cent. In fiscal 1955-56 industrial income exceeded net income from agriculture for the first time. Last year's industrial income of \$231 million far surpassed agriculture's \$155 million.

The role of Fomento plants in the island's economy has risen dramatically in recent years. In 1950 Fomento units accounted for \$8.2 million out of the total manufacturing net income of \$88.7 million. Last year Fomento units produced \$112.2 million of the total of \$230.9 million.

This means that Fomento plants showed an income increase of 1,368 percent between 1950 and 1958, while the overall manufacturing economy was growing 160 percent. Non-Fomento plants—mostly small units selling in local markets—increased their income only 98 percent.

At the same time, income produced by such traditional industries as sugar mills and tobacco stemmeries dropped 21 percent. These activities have been declining for several years as a result of adverse crop and market conditions.

It is clear, then, that the Fomento-promoted plants are by far the most dynamic element in the Puerto Rican economy. And these enterprises cover an impressive variety of industrial classifications.

In the early stages of Fomento work, greatest emphasis was placed on low-cost labor and, as a result, many apparel industries were attracted. As of June, 1958, apparel plants accounted for 34.3 percent of total employment

in Fomento units. Metal products, machinery, and instruments came second, with 15.6 percent, and textiles ran third with 11.9 percent. Other industries, ranked by percent of total employment, included rubber and leather, 11.3 percent; stone, clay, and glass, 5.0 percent; chemicals and petroleum, 4.0; tobacco, 3.7; lumber and furniture, 1.6; paper and printing, 1.4; and food, 1.2.

Surprising Diversification

You will be surprised at the diversification which already exists in these activities. Almost every major Standard Industrial Classification is included among Fomento plants already established or in process of being established. Let's take a quick look:

Food and kindred products—Plants include meat packing, dairy products, tuna canning, fruit and vegetable canning, flour and feed mills, bakeries, candy, and chewing gum, plus several products of local origin.

(For example, if you should buy a sandwich you may find what appear to be potato chips on the side. After the first bite, you'll discover "plantain chips" made from a variety of banana grown locally).

Tobacco manufactures—There are several plants processing wrapper tobacco and producing cigars.

Textile mill products—Fomento units include mills producing broad woven fabrics of cotton, wool, silk, and synthetics, with dyeing and finishing



Manufacture of apparel and textile products is one of the major industrial activities in Puerto Rico today. However, evidence of diversification is to be found everywhere.

facilities. There is a ribbon mill and a mill making elastic yarn. At last count, there were about 30 knitting mills making hosiery, sweaters, gloves, and men's underwear. There are also rug mills and yarn and thread mills, with products ranging from laces to burlap bags.

Apparel and related products—There are a couple of dozen successful Fomento plants making men's and boys' clothing and ladies' and girls' outerwear, such as dresses, blouses, and slacks. But biggest segment of the industry is manufacture of undergarments (ropa de interior). Fomento representatives boast that Puerto Rico "keeps American women out in front," since there are more than 30 plants manufacturing brassieres. This item has been one of best suited to early Fomento programs because a high proportion of cost is in labor.

Other fabricated textiles include such products as handkerchiefs, church vestments, flags, and auto seat covers.

Wood products—There are 18 Fomento plants making household furniture and related items such as mattresses and springs. Five plants make fixtures and furniture for stores, hotels, and restaurants.

One large sawmill has been established and there is one pressure treating plant for wood products.

Paper and allied products—There is a major mill producing pulp, paperboard, and wrapping paper, as well as a mill making paper for containers. Converted paper products include paper bags, envelopes, filing cards, and polyethylene packaging.

Printing and publishing—Activities include commercial printing, engraving, and binding.

Chemicals and allied products—Fomento has promoted a large variety of units making basic chemicals, intermediates, and proprietary items. Some indication is given by a partial list of products: oxygen, silicon, glycol, ammonia, sulfuric acid, plastic tape, synthetic hormones, steroids, perfume, insecticides, paints, adhesives, salt, alcohol, and detergents.

Petroleum products—Fomento has brought in two refineries, plus an asphalt plant and a unit making pipe coatings.

Rubber and plastic products—Items manufactured in Puerto Rico include shoes, light meter cases, buckets, pil-

Typical U.S. Firms with

Mainland Firm

American Can Co.
100 Park Ave.
N.Y.C., N.Y.

Beaunit Mills Inc.
450—7th Ave.
N.Y., N.Y.

Bostitch Inc.
Westerly, R.I.

Carborundum Co., The
Niagara Falls, N.Y.

Consolidated Cigar Corp.
2 W. 46th St.
N.Y., N.Y.

Continental Copper & Steel
Industries Inc.
New York, N.Y.

Davidson Chemical (W. R. Grace)
3 Hanover Square
New York 4, N.Y.

John W. Dixon
2666 Wicklow Ave.
Cleveland, Ohio

Dentist's Supply Co.
2914—2930 W. Dauphin St.
Philadelphia, Pa.

Exquisite Form Brassiere
373—4th Avenue
N.Y., N.Y.

General Electric
Providence, R.I.

Gulf Oil Corp.
Pittsburgh, Pa.

Grace & Co., W. R.
7 Hanover Square
New York City, N.Y.

Indian Head Mills Inc.
1407 Broadway
New York, N.Y.

Int. Molded Plastics Inc.
4387 West 35th St.
Cleveland, Ohio

International Latex Corp.
Playtex Park
Dover, Del.

International Shoe Corp.
St. Louis, Mo.

Puerto Rico Affiliate

Puerto Rican Can
Bayamón, P.R.

Beaunit of P.R. Inc.
Humacao, P.R.

Bostitch P.R. Inc.
Río Piedras, P.R.

The Carborundum Co. of (PR)
Mayaguez, P.R.

Consolidated Cigar Corp. of P.R.
Caguas, P.R.

Standard Steel & Wire Co. Inc.
Bayamón, P.R.

International Metalloids
Toa Alta, P.R.

Tropical Foods Inc.
Ponce, P.R.

Dentsply Inc.
Caguas, P.R.

Jem Mfg. Corp.
Hato Rey, Bayamón and
Santurce, P.R.

Caribe General Electric
Río Grande, P.R.

Caribbean Refining Co.
Cataño, P.R.

Paper Bag Division—P.R.
Container
Hato Rey, P.R.

Indian Head (P.R.) Inc.
Ponce, P.R.

Int. Molded Plastics of P.R. Inc.
Carolina, P.R.

Playtex Pan-Am Inc.
Manatí, P.R.

Manatí Shoe Corp., & Caribe
Shoe Corp. of P.R.
Manatí, P.R.

Operations In Puerto Rico

Lady Marlene Brassiere
20 W. 33rd St.
N.Y., N.Y.

Maiden-Form Brassiere Co.
154 E. Avenue
Bayonne, N.Y.

Nat. Cylinder Gas
Chicago, Illinois

N.Y. Wire Cloth
116 East Market St.
York, Pennsylvania

Nebraska Cons. Mills Inc.
314 S.—19th Street
Omaha 2, Nebraska

Ogden
New York, New York

Peter Pan Mfg. Co.
255 Grand Ave.
East Newark, N.J.

Parke Davis Interamerican
Corp. Ltd.
Detroit 32, Michigan

Phelps Dodge Copper
New York, N.Y.

St. Regis Paper
New York, N.Y.

Sunbeam Corp.
Chicago, Illinois

Sperry Rand
350—4th Avenue
N.Y.C., N.Y.

Union Carbide
New York, N.Y.

United Greenfield Tool Mfg. Co.
411 West Ontario St., Chicago

Van Raalte
417—5th Avenue

Vaisez Bristol Shoe Co.
101—4th Street
Monett, Mo.

Weller Electric Mfg. Co.
808 Packer Street
Easton, Pennsylvania

Warner Bros. Co. Inc.
325 Lafayette St.
Bridgeport, Conn.

Louisa Brassiere Corp.
Santurce, P.R.

Beatrice Needle Craft Inc.
Ponce and Mayaguez, P.R.

N.C.G. of P.R. Inc. (non-mfg.)
Bayamón, P.R.

Liberty Wire Corp.
Hato Rey, P.R.

Molinas de Puerto Rico
Guaynabo, P.R.

Am. Steroids Inc. & Pharma-
ceutical Products Co. Inc.
Hato Rey, P.R.

Puerto Rican Brassieres, Inc.
1004 Labra St., Stop 18
Santurce, P.R.

Parke-Davis & Co.
Carolina, P.R.

Phelps Dodge Copper
Products Internat'l Corp.
Carolina, P.R.

St. Regis Paper & Bag
Corp. of P.R.
Ponce, P.R.

Sunbeam Electric (PR) Co.
Hato Rey, P.R.

Vega Alta Corp.
Puerto Rico Card
Vega Alta, P.R.

Union Carbide Caribe Inc.
Peñuelas, P.R.

Colombia Mfg. Co.
San Lorenzo, P.R.

The Caribe Co. Inc.
Aibonito, P.R.

Foot-Mits Shoe Corp.
Ponce, P.R.

Weller Mfg. Co. Inc., P.R.
Bayamón, P.R.

Warner Bros. Co. P.R. Inc.
Guaynabo, P.R.

lows, toys, tubing, awnings, dinnerware, sprayers, wall tile, and identification cards.

Leather and leather products—There are three tanneries, plus a dozen shoe-manufacturing plants. Three Fomento units make gloves, and other plants make handbags, billfolds, moccasins, and holsters.

Stone, clay, and glass—There are plants making insulating board, glass containers, mirrors, cement, ceramic tile, brick, chinaware, insulators, pottery, concrete blocks, prestressed concrete beams, abrasives, and marble products.

Primary metals—One unit produces reinforcing rods, another makes staples and fasteners, and a third makes wire, chain, and fencing. A smelter produces non-ferrous metals—lead, antimony, brass, bronze. Two units produce aluminum extrusions and there are plants making copper wire, insulated magne wire, and zinc alloys.

Fabricated metal products—Among Fomento products are metal cans, cutlery, hardware, window parts, construction forms, screens, screw machine products, metal stampings, precision springs, trophies, and irrigation equipment. There are facilities for electroplating and anodizing.

Machinery (except electrical)—Products include such items as tools and dies, coffee pulpers, twist drills, saws, sanders, miniature steel balls, typewriter parts, and beverage coolers.

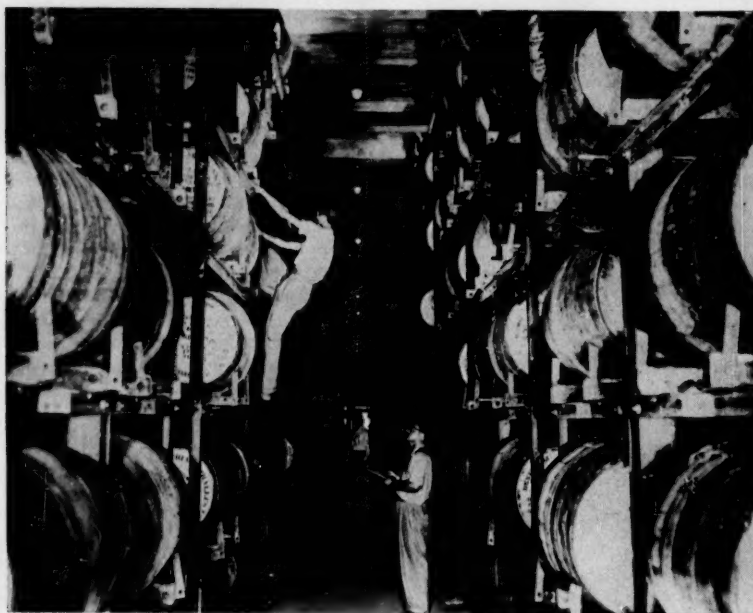
Electrical machinery—There are producers of relays, galvanometers, transducers, meters, circuit breakers, resistance panels, fuse pullers, motors, armatures, controls, switches, soldering guns, rectifiers, diodes, and seal terminals. Appliances and fixtures include shavers, toasters, vacuum cleaner parts, fluorescent fixtures, lamps, and wiring devices. There are several makers of phonograph needles and records and radio and TV parts. And the list covers communications equipment, antennae, filters, transformers, capacitors, batteries, and even components used in guided missiles.

Transportation equipment—Fomento workers have added units assembling buses and trucks, a plant making aircraft components, and another producing fiberglass boats.

Professional and scientific instruments—Puerto Rico is now the home of plants making surgical instruments, drafting equipment, thermometers, underwater cameras, telescopes, lenses, light meters, watches and clocks.



Visiting industrial areas in Puerto Rico you find a mixture of well-established old industries such as rum distilling (below) and the latest in technological enterprises (above).



Miscellaneous—Rounding out the list are such products as jewelry, diamond cutting, novelties, dolls, softballs and baseballs, swimming pool kits, fishing tackle, boxing gloves, ball point pens, artificial flowers, zippers, toothbrushes, and cigarette holders.

There! If you've stayed with us through that list, you should have dis-

pelled any doubts regarding the scope of the Fomento program. Obviously, the industrial development of Puerto Rico is not temporary or artificial. It's a large-scale activity involving scores of well-managed, farsighted firms. Their field of work, as seen above, covers the waterfront.

Your next question, then, is "Why?" Why have these dozens of substantial U. S. manufacturers come to Puerto Rico? What sound economic factors have influenced their selection of this location?

Tax Exemption Program

When asked how EDA has been able to bring so many industries to Puerto Rico so quickly, Administrator Moscoso says "We have the incentive of all incentives—tax exemptions."

And indeed this is a powerful attraction. If you should locate here your operation will enjoy the blanket exemption from all federal taxes which applies to all residents of Puerto Rico, including corporations that are subsidiaries of mainland firms.

Also you can probably qualify for exemption from Commonwealth and municipal taxes. This is so important, let's get the facts on tax exemptions directly from an official government report:

What is the basis for the tax exemption incentives offered by Puerto Rico to industrial firms? Act No. 6, the Industrial Incentives Act of 1954, passed December 15, 1953, by the Legislature and approved by the Governor of Puerto Rico. This Act, which supersedes Act No. 184 (The Industrial Incentives Act of 1948), provides a standard period of exemption from the commencement of operation, as contrasted with the fixed date of expiration (1962) provided in the 1948 Act.

What taxes does this exemption cover? Puerto Rican Income Taxes on income from the operation of a tax exempt firm. This exemption includes not only the tax on the individual, corporate, or partnership income, but also on dividend or profit distributions made to residents of Puerto Rico or to those non-residents who are not required to pay any taxes outside of Puerto Rico on their income derived in the Commonwealth. It also includes income received from the lease of real property constructed or installed for an exempt firm, or income from the lease of equipment or machinery.

Property Tax, both Commonwealth and Municipal, on property employed in the development, organization, construction, establishment and operation of a tax-exempt firm.

Real and personal property constructed or installed for lease to an exempt firm is also exempt from property taxes while it is used for the organization, establishment, or operation of the exempt firm.

Municipal Taxes such as license fees, excises or other business taxes levied by the municipalities of Puerto Rico.

For what period of time is the Puerto Rican tax exemption effective? Income tax and municipal license tax exemptions are effective for a period of ten years commencing on the date when the tax exempt industry starts its operations. Dividends paid to residents of Puerto Rico out of the earnings of the first seven years of operation are exempt if paid within the first fifteen years.

In the case of real and personal property, machinery and equipment, the period varies from five to ten years, depending on the amount of investment. Exemption from property taxes becomes effective on the first of January preceding initial operations as regards property then owned by the tax exempt business, and on January 1st next following initial operations as regards property acquired after start of operations.

Which businesses are eligible for tax exemption? Any firm which (a) will start the production in Puerto Rico, on a commercial scale, of a manufactured product which was not produced on a commercial scale in Puerto Rico, or for which there were no facilities for the commercial production thereof, on January 2, 1947.

(b) will start a unit to produce a substantial additional quantity of a "designated" article as defined in the Industrial Incentives Act.

(c) operates an existing unit producing a "designated" article after the additional unit referred to in the preceding paragraph has begun to produce the same article on a commercial scale.

(d) will operate a commercial or tourist

hotel in accordance with prescribed standards. (The fact that a tax exempt firm, currently manufactures a product in Puerto Rico does not preclude other companies from being granted tax exemption to make the same article.)

What is meant by "manufactured products eligible for tax exemption"? Products transformed from raw materials into articles of commerce finished by hand or machine; agricultural products obtained through hydroponics; and any product with respect to which substantial industrial operations are undertaken in Puerto Rico, and which by the terms of the Act the Governor of Puerto Rico judges to merit treatment as a manufactured product.

Once a firm is granted tax exemption to manufacture any given article, it may usually be assumed that other firms meeting the requirements are entitled to secure tax exemptions to produce the same item.

If you should decide to locate here and you want to know whether you can get a tax exemption, the EDA people will get an answer for you in a hurry.

The research department will determine if the product you want to make is needed or duplicated. The legal department will make a tax recommendation and the matter then goes to the treasury department and state department for final approval by the Governor.

This sounds complicated but it is actually done very quickly, normally within 90 days. And there is a good reason for this systematic approach and for the caution used in granting tax exemptions. EDA officials emphasize that they are not looking for "runaway" industries or for marginal or shady operations. They want healthy growth and they are determined to get it.

Alright, you can see the possibilities for improving your profit position if you don't have to pay taxes. Your next question is "How can I withdraw my profits?"

The EDA replies that the benefits

HOW CORPORATE TAX EXEMPTION AFFECTS PROFITS

| If your net profit after U.S. Corporate Income Tax is: | Your net profit in Puerto Rico would be: | Your gain with tax exemption: Dollars | Per Cent |
|--|--|--|----------|
| \$ 17,500 | \$ 25,000 | \$ 7,500 | 43% |
| 29,500 | 50,000 | 20,500 | 69% |
| 53,500 | 100,000 | 46,500 | 87% |
| 245,500 | 500,000 | 254,500 | 104% |
| 485,500 | 1,000,000 | 514,500 | 106% |

HOW DIVIDEND TAX EXEMPTION AFFECTS INCOME

(When all income is from dividends)

| If your dividend income is: | Your dividend income after United States tax, if you are single, would be: | As a resident of Puerto Rico your dividend income would be: | Your gain with exemption would be: Dollars | Per Cent |
|-----------------------------|--|---|---|----------|
| \$ 5,000 | \$ 4,187 | \$ 5,000 | \$ 813 | 19% |
| 10,000 | 8,253 | 10,000 | 1,747 | 21% |
| 15,000 | 11,553 | 15,000 | 3,447 | 30% |
| 25,000 | 16,757 | 25,000 | 8,243 | 49% |
| 50,000 | 26,302 | 50,000 | 23,698 | 90% |
| 100,000 | 38,049 | 100,000 | 61,951 | 163% |
| 200,000 | 52,599 | 200,000 | 147,401 | 280% |
| 500,000 | 91,615 | 500,000 | 408,385 | 446% |

If your company's net profit before taxes is \$100,000: In the U. S. your profit after Federal taxes would be \$53,500; and if this is paid to you in dividends, your income after taxes would be about \$27,366 (To simplify, this does not take into account income splitting or state taxes).

In Puerto Rico, with a tax exempt firm, the corporate profit remains intact and the full \$100,000 would be payable as dividend income any time within the first fifteen years of factory operation that the shareholder establishes bonafide residence. The dividend may cover seven years' earnings.

The distributions of dividends and profits by a corporation or partnership that is an exempted business, if made within 15 years of the commencement of operations of such exempted business, and if made from industrial development income derived during the first seven years of its operations covered by the exemption and paid to the following shareholders or partners shall be exempt from income tax in the same proportion in which such industrial development income is exempt from taxes in favor of the exempted business.

of the Exemption Act are available to all bona fide residents of Puerto Rico, including individuals who own a business directly or through a corporation whose stock they hold.

The Act provides that dividends paid out of the earnings of an exemption operation during its first seven years of operation may be distributed free of taxes to resident individuals and corporations within the first 15 years of operation.

Gains derived from the sale of stock of a tax-exempt operation are tax free if the sale is made prior to the expiration of the firm's tax-exempt period.

Tax-free profits may also be withdrawn through the liquidation of an exempted business by the procedure known as a tax-free merger. This procedure is outlined in the Act and closely parallels the provisions of the Federal Internal Revenue Code.

What constitutes bona fide residence in Puerto Rico? Bona fide residence requires more than mere physical presence in Puerto Rico. An individual becomes a bona fide resident when he demonstrates his intention to stay in Puerto Rico for an extended period of time and is not merely a transient. Generally, residence is established if an individual brings his family to Puerto Rico, purchases or rents a home there, brings his personal possessions with him, enters into the social life of the community, and signs all official documents and records as a resident. If such factors are present, occasional visits to the United States will not jeopardize an individual's status as a resident of Puerto Rico.

Another question is the possibility of transferring your tax exemption. Regulations provide for this to be done upon written notification to the Governor. The law also provides that an exemption may be revoked "for good and proven cause after a hearing." For practical purposes, the tax exemption is in the nature of a contract between the grantee and the Commonwealth.

Not covered by the exemption are workmens compensation premiums, Federal Social Security contributions, fees for motor vehicle licenses, and a few local license fees.

Managers and technical personnel who are or become bona fide residents of Puerto Rico can draw tax-free dividends from stock participation in a tax exempt enterprise. With respect to their income received as salary, their taxes in Puerto Rico will be lower in

most cases than it would be in the United States.

When you get into such question as to whether it would be more desirable to set up a Puerto Rican corporation and just how the income should be handled, you had better consult an expert tax adviser. However, you will find that considerable technical information has been assembled by the EDA for your guidance.

For example, there is a published memorandum on the relation between Puerto Rico taxes and U.S. tax on a U. S. corporation operating through a subsidiary in Puerto Rico. Prentice-Hall has published a bulletin on "Tax Advantages of Doing Business in Puerto Rico" and there is an excellent report in the *Tax Law Review* on "Tax Aspects of Operations Under the Puerto Rican Exemption Program." Still another good reference is "What You Should Know About Taxes in Puerto Rico" published by the Department of the Treasury here in San Juan.

Other Financial Incentives

In addition to tax exemption, you will find a variety of other substantial incentives available here. You can get governmental help for financing your building, your machinery and equipment, or your actual operations.

New industrial buildings will be made available to you at 50 cents to 95 cents per square foot per year. Factories built to your specifications may be

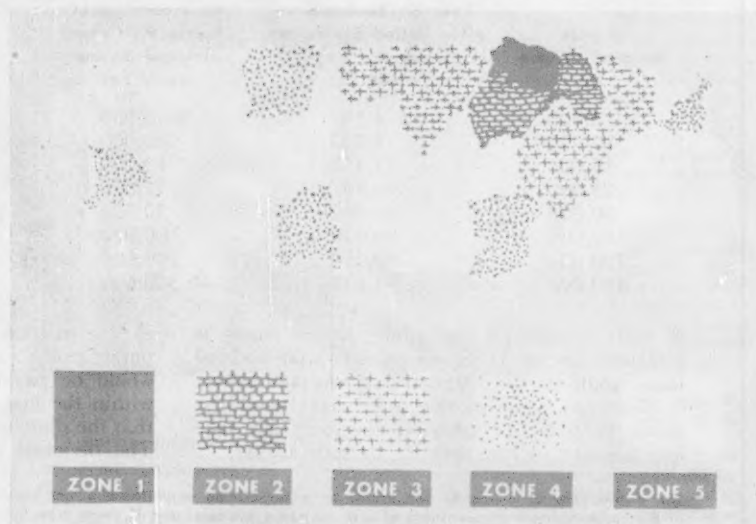
purchased with a down payment of little more than 10 per cent, the balance to be amortized on a long-term basis with interest at 5 per cent.

On your machinery and equipment you may obtain Government Development Bank loans up to 50 per cent of its uninstalled value, usually for 5 years at 5 per cent. If you are unable to get bank financing you may qualify for loans by Pridco.

Moreover, there are special incentives to firms servicing local industry, processing local raw materials, locating in smaller towns, or employing 500 or more workers. Grants of as much as \$25,000 may be made to you to cover such items as: one year's free rent, half of the cost of shipping your machinery and equipment from the mainland, and the salaries of instructors brought here to train your workers.

Because of this extensive aid provided by the government you may leap to the conclusion that most of the investment in Puerto Rico today is from governmental sources. But this is far from true.

At present, about one-eighth of all investment here emanates from the Puerto Rican government, about one-eighth is local private capital and about three-fourths is private capital from the mainland. There is a trend toward less governmental investment and it appears likely that the great proportion of investment for the foreseeable future will be private capital from the mainland.



Recognizing variations in costs and plant location attractions, EDA has divided the island into five zones. If you desire to locate a plant in the less developed area (zone 5) you will be given greater incentives than if you should select a site around San Juan (zone 1).

Government Development Bank president Rafael Pico emphasizes that his organization is not in competition with commercial banks or other leading institutions. The GDB, he says, is primarily concerned with supplementing financing available from other sources.

Sites and Buildings

Your problem of site selection and plant location in Puerto Rico is simplified by the fact that the one planning board operated by the Commonwealth government covers the entire island. This means that any questions you may have about zoning of industrial areas can be resolved easily at one source.

It is also significant that the planning group has considerable authority. For example, the government selects promising sites for business activity, condemns them, and purchases them for future use. There are choice shopping center sites being held for future development right in the middle of metropolitan San Juan.

Also a substantial effort is being made on planned industrial districts. One of those visited by ID's editor was the Minillas industrial subdivision at Bayamon, Southwest of San Juan. Owned and operated by Pridco, this district already includes a variety of well-planned industrial units.

Driving through the subdivision there are such familiar names as American Can, Holsum Bread, No Sag Springs, United Food, and U. S. Rubber. The American Can plant is one of the largest on the island.

The road to Bayamon is a picturesque drive along a country lane lined with Flamboyant trees which hang over the roadway. The industrial district lies in a green valley ringed by mountains and is quite picturesque.

Some of the districts laid out early in the Fomento program do not come up to U. S. standards with respect to such things as space ratios and off-street parking. For one thing, few workers were able to own automobiles and such areas were not needed.

Another reason is that land costs here are relatively high. The population density places pressure on land values and it is not uncommon to pay more for a site on the island than on the mainland.

Costs of undeveloped land around San Juan range as high as \$17,000 per acre and in the smaller communities



Signs of Progress

Everywhere you go in Puerto Rico you see signs announcing new construction. A familiar Fomento sign appears on the plant above, while the displays below refer to a brewery and a housing project.



and cities may run from \$1,000 to \$5,000. Improved land around San Juan may go to \$30,000 and may be as high as \$5,000 to \$10,000 elsewhere.

Moreover it is likely that land costs will continue to be high as industrialization creates new demands. But it is likely that Fomento planners will be more generous with space in newer districts as workers begin to acquire automobiles and traffic problems appear.

With respect to industrial buildings, you will find an unusually imaginative program. Pridco keeps a number of standard one-floor buildings available for immediate occupancy.

Construction costs are reported at about \$3.50 per square foot for a locally prefabricated steel frame and asbestos cement structure. Concrete buildings cost from \$6 to \$7.50 per square foot and steel frame structures cost from \$4.50 to \$5.00.

Buildings may be rented from private owners at costs ranging from 60 cents to \$1.00 per square foot for new buildings. And, Pridco also maintains standard buildings for rental. These are available in either 11,500 or 23,000 square foot sizes.

Most of the buildings occupied by Fomento projects have modest but attractive offices and the usual sanitary facilities. Few include cafeterias—because of an interesting Puerto Rican tradition, the “Friamberria,” a lunch pail used almost universally by male workers in the manufacturing plants.

The friamberria consists of three or more compartments stacked one upon the other and is used for bringing a hot meal to the plant. A typical luncheon includes rice, beans and meat. The friamberrias are brought at lunch time while the food is hot either by the workers wife or by some housewife nearby who prepares lunches for a group of workers. Oddly enough, the custom is not followed by the female workers and in plants where they predominate a cafeteria is usually provided.

Plenty of Labor

Next to tax exemptions and financial inducements, the most important attraction in Puerto Rico today is an abundance of low-cost labor. For every job you need to fill you may find from 4 to 10 qualified applicants.

Prime reason for this huge reservoir is the population density on the island, at present about 650 citizens per square mile.

Population density of Puerto Rico can be realized more readily if it is considered that the United States could have the same density only if it accommodated almost all the citizens of the world—some two thousand million people!

Only Rhode Island, which consists mainly of industrial cities, has a comparable population density. By comparison, Ohio has a density of less than 200 citizens per square mile and the figure for New York is less than 250.

Recent advances in public health have brought life expectancies in Puerto Rico up to within a year or so of the figure in the U. S. Moreover since warmer areas tend to produce longer life expectancies where medical and health programs are advanced, there is every reason to believe the life expectancies here will soon exceed those in the states.

The population on the island is now fairly stable with the out-migration balancing the high birth rate. Unem-



Today you can find plants in Puerto Rico representing the biggest names in the U. S. At left Esther Williams visits her branch unit as the plant baseball team warms up for a game.

ployment runs about 13 percent of the labor force despite gains made by Fomento.

Moreover, there are many workers employed at low wage levels in agriculture, trade and services who are available for more remunerative industrial work. It is significant, too, that some 40 percent of the labor force is between 20 and 35 years of age. This force will remain young for some time because almost half of the present population is under 14 years of age.

About half the factory workers are women. But if females constituted the same portion of the labor force that they do on the mainland (one-third) about 50,000 additional female workers could be employed for manufacturing.

As a result of the large labor surplus average hourly wage rates on the island are substantially below those on the mainland. An hourly wage of 75 cents to \$1.00 is considered high and is found only in a few industries where greatest skills are required. Rates taper off to less than 50 cents for some activities.

Two sets of minimum wage requirements apply here. If you sell in interstate and foreign commerce you are subject to the Federal Fair Labor Stand-

ards Act. Purely local industries are regulated by the Puerto Rican minimum wage board.

To determine Federal minimums, special wage boards are convened here periodically to fix rates for each industry category. Over the last 8 years for example, the minimum in the electronics industry has been gradually increased from around 50 cents an hour to close to \$1.00. (The rate is required by law to approach as near to \$1.00 as possible without causing reduction in employment).

Perhaps it would be natural for you to assume that labor available at such low rates would be relatively unproductive. However, manufacturers who have operated here for several years report that Puerto Rican workers soon approach and often surpass production rates for similar operations in mainland plants. Piece work pay systems are common, especially in apparel.

Admittedly there is some cost in starting up operations with personnel unaccustomed to factory work. The usual procedure is to provide vocational training for new employees and then to follow with a period of on-the-job training. This transitional phase

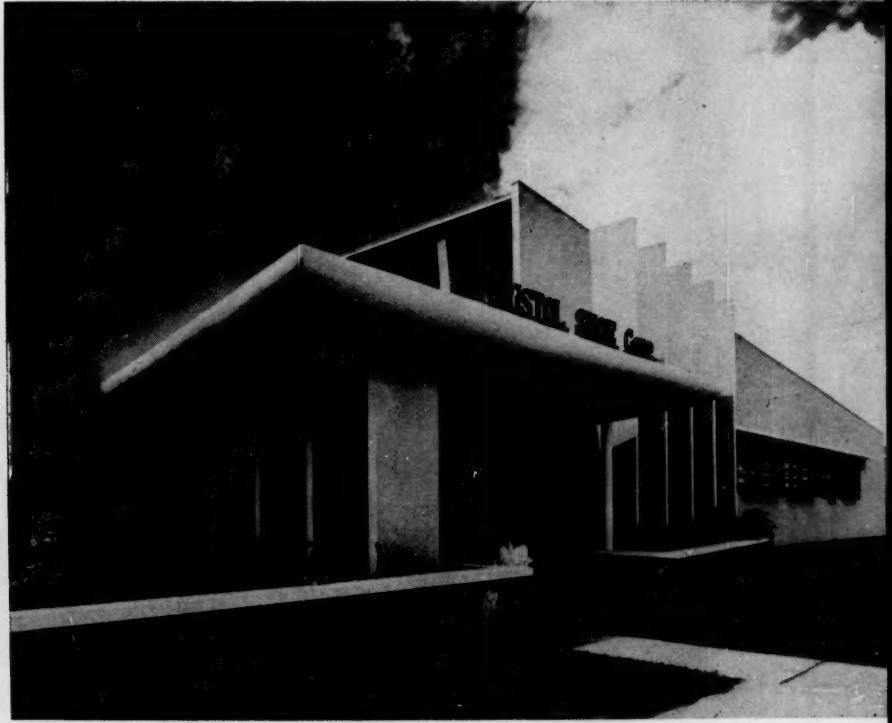
may involve operating at a loss for a short time.

It is also customary to bring in higher skilled and technical personnel from the states to provide supervision during the early stages of the operation. Since it is usually necessary to provide incentive payments to mainland personnel who locate here temporarily, an extra expense is incurred.

The Commonwealth has acted to ease these problems by special training programs and other concessions. Today the government here will screen and train your workers, provide apprentice training, and if necessary, set up special courses. Twelve vocational schools now graduate more than 6,000 students annually. The University of Puerto Rico has the largest technical and engineering school South of the border.

Labor legislation in Puerto Rico is similar to that in many states. There is no Right-To-Work law but neither does there seem to be indication that organized labor has gained the upper hand.

Only a small percentage of the new plants are organized and strikes in manufacturing have been infrequent. The strongly organized waterfront

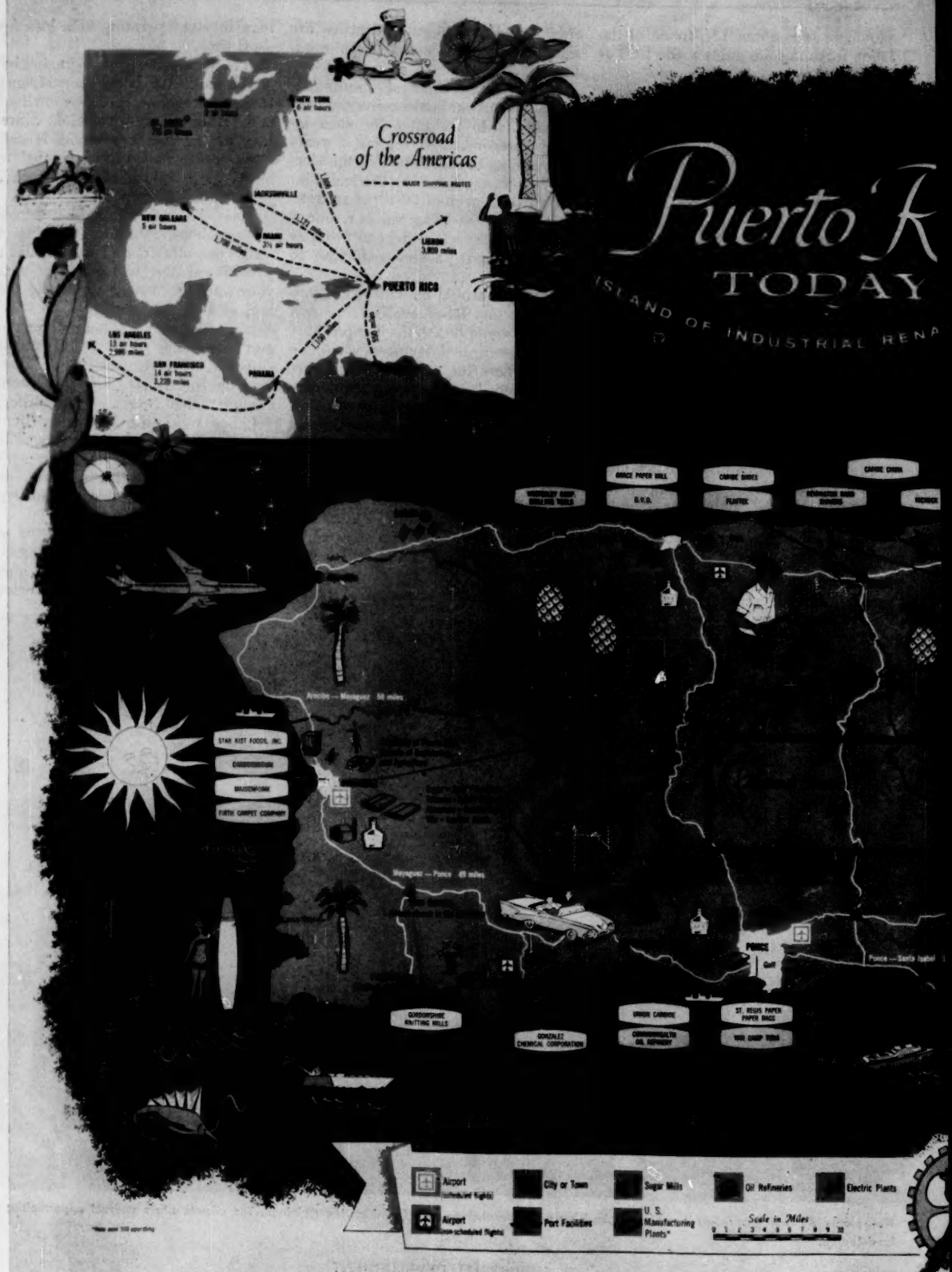


New plants in Puerto Rico reflect the same emphasis on aesthetics that may be found on the mainland. The climate offers unusual opportunities for landscaping.

Crossroad of the Americas

Puerto Rico TODAY

ISLAND OF INDUSTRIAL RENAISSANCE





Minimum Wages In Puerto Rico

Here is a schedule which shows the higher rate established for selected manufacturing industries in Interstate Commerce, either under the latest applicable Federal or Commonwealth wage order for each industry.

| <i>Industry</i> | <i>Applicable Minimum Rate</i> |
|--|------------------------------------|
| <i>Apparel</i> | |
| Women's and Children's Underwear (including infant's underwear) Hand-sewing | .48 |
| Other operations | .70 |
| General Division (including e.g., crochet beading, suits, coats, skirts, fur garments and related) | .77 |
| <i>Chemicals, Petroleum and Allied</i> | |
| Agricultural Chemicals | 1.00 |
| Drugs and medicine bay oil, aromatic alcohol & toilet preparations | .75 |
| Fertilizer mixing | 1.00 |
| Hormones, antibiotics & adrenalin | 1.00 |
| Industrial inorganic chemicals | .85 |
| Miscellaneous chemical products | .90 |
| Petroleum refining | 1.00 |
| <i>Electrical Instrument and Related</i> | |
| General Division | .88 |
| <i>Food and Kindred</i> | |
| General Division | .75 |
| Alcoholic Beverages & Industrial Alcohol | 1.00 |
| Sugar Manufacturing | 1.00 |
| <i>Leather, Leather Goods & Related</i> | |
| General Division | .53 |
| Shoe Manufacturing & allied | .55 |
| <i>Metal, Machinery, Transportation Equipment & Allied</i> | |
| General Division | 1.00 |
| <i>Paper & Allied: Printing, Publishing & Allied</i> | |
| General Division | .85 |
| <i>Plastic Products</i> | |
| General Division | .68 |
| <i>Rubber Products</i> | |
| Rebuilt and vulcanized tire | .90 |
| Rubber buckets | .75 |
| <i>Stone, Clay & Glass Products</i> | |
| General Division | .90 |
| <i>Straw, Hair & Related</i> | |
| Hair & bristle processing & other straw hair & related | .55 |
| <i>Textiles</i> | |
| General Division | .62 |
| Hosiery | |
| Full-fashioned | .67 |
| Seamless | .65 |

Average Hourly Earnings of Manufacturing Production Workers

| | | Puerto Rico | United States | Absolute wage differential | P. R. as % of U. S. |
|---------|------|-------------|---------------|----------------------------|---------------------|
| October | 1954 | \$0.50 | \$1.81 | \$1.31 | 28 |
| | 1955 | 0.55 | 1.91 | 1.36 | 29 |
| | 1956 | 0.66 | 2.02 | 1.36 | 33 |
| | 1957 | 0.77 | 2.09 | 1.32 | 37 |
| June | 1958 | 0.84 | 2.12 | 1.28 | 40 |

workers, however, have engaged in walkouts which caused significant losses to manufacturers by interrupting flow of materials. However, one Puerto Rico steamship association and the Dock Workers Union (AFL-CIO) have signed a contract which guarantees against a waterfront strike for the next three years.

Overtime must generally be paid in operations engaged in interstate commerce at time and a half for hours in excess of 8 in a day or 40 in a week, and in operations engaged exclusively in intrastate operations, at double time if in excess of 8 hours per day and 48 hours per week. All work on the seventh consecutive day of work per week must be paid at double the rate.

With certain exceptions, notably in the manufacture of textile products, women may not be employed between 10 p.m. and 6 a.m. Pregnant women must be granted leave at half-pay for a period of 4 weeks before, and 4 weeks after, childbirth. Workmen's compensation insurance is mandatory for any establishment employing more than two persons.

If labor is an important cost item in your product and is a major influence on your plant location decision, you should consider not only the present wage level but the trend of wages here in the foreseeable future. There is a very deliberate effort to raise minimum wages "as rapidly as possible" to meet the objectives of the EDA program.

It has become quite generally accepted within Fomento, as well as by the Federal and Commonwealth wage-setting agencies, that "as rapidly as possible" means establishing the highest wage for an industry that will enable practically all existing firms to survive; in other words, increasing labor income as much as possible, without destroying a substantial number of jobs.

There is strong evidence that actual administration of minimum wage legislation has been in close accord with this meaning of "as rapidly as possible." In the course of a systematic analysis of the reasons underlying closings of Fomento factories, no case was found prior to 1956 in which a minimum wage increase was the basic cause of closing, although it was a contributing cause in a few instances.

During 1956 and 1957, however, there were 6 plant closings, with an employment loss of 231 jobs, for which increased minimum wages were found to be the basic, underlying cause. The

job lost was mainly in the apparel industry but it was not large in relation to total employment.

While maintaining this record of comparatively little job loss, it has still been possible to increase minimum wages very rapidly. By the end of 1957-58, 43 industry divisions were at the \$1.00 figure which obtains in the United States. Only 10 divisions were paying a minimum wage of less than 50 cents an hour, which had been the average wage for all factory production workers only four years earlier.

The speed with which wages have been rising, particularly during the last two years, is shown in the accompanying table.

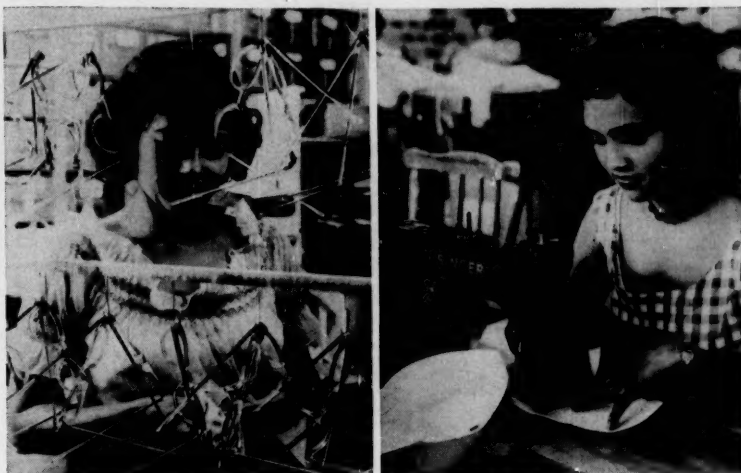
Since October 1954, earnings of factory workers have increased 17 percent in the United States; 62 percent in Puerto Rico. Four years ago, Puerto Rican factory workers earned a little over one quarter as much as U. S. factory workers; today they earn well over a third as much.

What is more surprising than this perhaps almost unprecedentedly steep rise in wage rates is strong, though indirect, evidence that it was matched by at least a roughly equivalent increase in overall manufacturing productivity. Both manufacturing net income and exports of manufactured products have been rising much faster than factory employment. Moreover, during both 1956 and 1957 there were small increases in profits per dollar of sales among tax exempt firms, which now account for approximately half of total factory employment.

Despite wage levels which today seem low according to mainland standards, the average Puerto Rican worker is improving his economic status and standard of living at a remarkable clip. When the Fomento program got underway a decade ago 70 percent of the workers who were employed in the first plant had never been in a factory before!

Living Costs Are Low

Administrator Moscoso points out that the differential in wages paid between the states and Puerto Rico does not necessarily mean a similar difference in the standard of living, because it is possible to live here more economically. There is no heating bill, no expensive winter clothing to buy, and little cost involved in such recreational activities as swimming and fishing.



Puerto Rican girls are as efficient in the plant as they are attractive. In many cases they have shown that they can be taught quickly to handle precision work and intricate processes.





The new San Juan International is just one of a number of spectacular hotels on the island. Travel has been increasing so rapidly that new units are booked solid as rapidly as they can be built.

AMENITIES

A Place In The Sun

When you get off your plane in San Juan you stroll past a tropical garden into the baggage receiving area where a bamboo bar has been set up to administer Daiquiris and various iced rum drinks to visitors with the compliments of the Puerto Rican rum industry. You enter your taxi in a mellow mood which is likely to continue throughout your stay.

The fact that Puerto Rico is a pleasant place to spend a few days, particularly during the winter, has had a tremendous influence on industrial development. It is actually difficult to separate the tourist promotion and the industrial development programs because they depend so heavily on one another.

Undoubtedly many business executives have come to the island on a vacation with no thought of expanding their activities here and have left with specific ideas in mind. Local promoters very logically view every visitor as a possible industrial prospect.

Significantly the new Dorado Beach

hotel offers \$175 suites and \$50 a day rooms—and they have been filled since the day the plush resort was opened in December. "Any one who can pay those rates is a potential investor in Puerto Rico" one EDA official asserted.

It is no doubt that many executives have come down here on "business survey trips" to enjoy a nice vacation on the expense account. And EDA officials say that they are very happy to show these people around, since a casual interest now may be converted to a very serious interest in the future.

Every time a U.S. businessman visits the island he is exposed to the Fomento program. You will find a slick brochure on plant location factors in your hotel room. And everywhere you go you will see the signs "Otra Fabrica del Programa de Fomento."

Some idea of the extent of this travel can be gained from statistics recently published by EDA. These figures show that the island now plays host to some 200,000 visitors annually as compared with about 50,000 ten years ago. In

the last 8 years the number of cruise ships, for example, has increased from 6 per year to 44.

One of the reasons for this increase is the rapid improvement of tourist hotel accommodations, termed "a major breakthrough" by EDA officials.

The opening of El San Juan, the Garden Wing of the Caribe Hilton and four smaller establishments added 570 new hotel rooms in a single year, more than 10 times the annual average during the intervening 8-year period which followed the opening of the Caribe Hilton.

Even more important, additional hotel projects under construction or in advanced stages of negotiation were expected to add another thousand or more rooms during the next two years. Thus the total number of hotel rooms, which had been 1,155 at the beginning of 1957-58, was 1,725 by the year end and is expected to reach 2,790 by the end of 1959-60.

Even though tourist accommodations outside San Juan more than doubled during 1957-58, the total at the year end was only 162 rooms. The location of the hotels expected to open during the next two years, however, is radically different. More than half the new rooms (539) will be outside San Juan. Thus, by June 1960, one-fourth of all tourist accommodations (701 out of 2,790 rooms) will be outside the metropolitan area.

Apart from the general advantages to be gained from "decentralizing" tourist expenditures, the existence of first-class accommodations throughout the island should substantially increase tour and sightseeing activities and contribute to a lengthening of the visitor's stay which, although it has increased somewhat in recent years, still probably averages less than a week for those who stay in hotels.

The level and variety of complementary facilities and attractions appears to be keeping pace with the rapid increase in hotel accommodations. A number of attractive shops in Old San Juan, half a dozen new first-class restaurants, a sharp increase in the number of rental cars available and continued growth of sport fishing facilities have helped in maintaining a balanced growth in what the island has to offer tourists. The expanded program of Festival Casals, Inc. and legislation establishing a symphony orchestra will be attractive to tourists as well as the local community which they are mainly intended to serve.

EDA surveys also reveal that more than half of the visitors here have incomes of more than \$10,000 a year. Some 32 per cent are proprietors or managers of business enterprises; 31 per cent are professional men. The median age of visitors is below 40 and some 60 per cent have had college educations. More than one-third report New York as their place of residence.

How Mild Is The Climate?

In the United States most of the weather originates in the Northwest and moves to the Southeast. It is not uncommon for a cold front to start in Western Canada and sweep all the way across the nation to Florida.

Quite a different pattern prevails in the Caribbean and the Island of Puerto Rico has its own distinct climatic characteristics. Prevailing winds are from the East and Southeast. The large bodies of water which surround the island in all directions provide a stability in temperatures.

Generally, clouds drift in from the East and deposit their moisture on the mountains along the backbone of the island. By the time the air masses reach the Western tip there isn't much moisture left.

The result is that a point a few miles Southwest of Luquillo is classified as a tropical "rain forest" with an annual rainfall of 200 inches. Several places in the central mountains report 90 to 100 inches per year. By contrast only 30 to 40 inches per year falls along the Southwest coast from Ponce to Cabo Rajo.

In the San Juan area annual rainfall is in the 60 to 70 inch range and at Mayaguez the total is between 80 and 90 inches. Of course, the ground water situation throughout the island is generally excellent as a result of this abundance of moisture.

Temperatures in Puerto Rico are mild year round and the variation between summer and winter is only 5 or 6 degrees. Along the coast, mean temperature is in the high 70's and in the central mountains about 8 to 10 degrees lower.

Except where a specific process requires it, air conditioning is not considered to be necessary. There are no provisions whatever for heating.

If you want more detailed information on the Puerto Rican climate you will find the data you want in the files of the U. S. Weather Bureau. More-

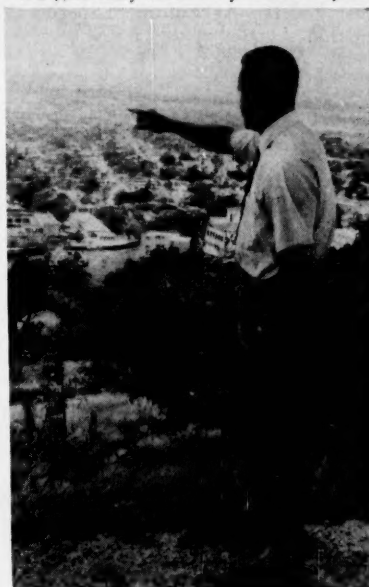


If you like salt water fishing you will find plenty of opportunities in the Caribbean. This blue marlin won a prize at the International Game Fishing Tournament at Mayaguez on the West coast.

over, U. S. Geodetic Survey maps cover the entire island.

Executives who expect to use either company or private aircraft will find flying conditions around Puerto Rico to be unusually good. There is practically no smoke and haze over most of the island and there is very little extended fog.

Alfredo Cortes, pilot for the Puerto Rico Water Resources Authority, says "We generally have only a few days a



This is the site on a hill overlooking the bay at Ponce where a new multimillion-dollar international hotel is now under construction.

year when we are unable to go where we want to go. We may have a few minutes of instrument weather over the mountains but we almost always have good ceilings at the airports along the coast. In most cases if the weather is bad it isn't bad very long."

As far as air traffic is concerned, the terminal at San Juan is busy, but at the other airstrips around the island there is not even the necessity of control towers. The highest point on the island is at about 4,500 feet and it is possible to circle the entire island around the coast in less than two hours in a medium-speed airplane.

Flying between the major cities on an industrial survey tour, ID's editor was impressed by the fact that despite the terrain almost every acre is in some type of use.

Sugarcane is planted up the slopes of hills that are so steep that the product can be taken out only on the backs of oxen. Many towns are perched on hillsides or sandwiched in deep valleys.

Not matter how you travel, you will find a swing around the island to be a fascinating experience. You will learn quickly that not all industrial and business activity centers around San Juan.

There are booming cities such as Ponce on the South coast, Mayaguez on the West coast and Arecibo on the North coast. On a tour of the Ponce area ID's editor saw an impressive array of new and existing industries.

The development around Ponce is distinctive in that it consists primarily of the large, heavy basic industries. For example, there is the Don Q rum plant which has a world renowned product. Don Q rum, and which more recently has begun marketing Serranov vodka. Standing on the airstrip at Ponce you can look across the cane fields where workers are leveling a fresh crop with machetes and see the Don Q plant at the end of a lane of stately palms.

An impressive landmark at Ponce is the district hospital which provides public health facilities for the city's 150,000 population. An ultramodern building, it provides the very best in medical attention for all segments of the population. Total cost was in excess of \$9 million.

As yet, Ponce has not received the wave of tourist traffic that has been noted on the North coast for the reason that it does not yet have the hotel facilities required. However, a boom

in tourism is just around the corner because a very elaborate new 174-room intercontinental hotel is under construction on a mountain overlooking the city and the Caribbean.

The site is reached in about 10 minutes via a winding drive up a hill reminiscent of San Francisco. On one side the land drops away into the valley and on the other clinging to the cliffs are the homes of some of Ponce's leading citizens, with flowers and shrubs blooming in profusion. A quaint touch is added along the way as coffee beans are spread to dry on the shoulder of the road.

Altogether Ponce has about 30 plants gained under the Fomento program. These include Spray Caribe which manufactures condensers, Weston Electrical, Van Camp Tuna and Maiden Form Brassiere.

One interesting operation is the Insuldyne plant which manufactures insulating board using a wood hitherto considered useless — yagrumo. The wood of the yagrumo tree is very light in density and research determined that it was ideal for conversion to excelsior and then as a base for the insulating material.

One of the industrial showpieces of Puerto Rico is the Commonwealth Oil Refinery located on the south coast at Guayanilla some 20 miles west of Ponce. Built at a cost of some \$50 million by an independent firm, the refinery has had a very beneficial influence on the economy of the surrounding region.

Already it has attracted Union Carbide Caribe which has located a \$28 million glycol plant nearby. Also there is a huge new power plant and the other components of a petrochemical complex seem destined to follow.

Plant manager for Commonwealth Oil is Cary W. Brackin who came down less than two years ago from Destrehan, Louisiana. A graduate of Mississippi State College, the University of Louisville and MIT, Brackin is high in his praise of the ability of the local workers.

"They are eager to learn and we have had good success with them," Brackin says. "We have first line supervisors who have been working in industry only two years," he explains.

The reasons for the location of the refinery in Puerto Rico, according to Brackin, were twofold: the tax exemption and accessibility to Venezuelan crude oil. The refinery sells about 20 per cent of its product in Puerto Rico and the rest is distributed throughout the world.

Mayaguez on the Western tip of the island is Puerto Rico's third largest city. In the mountains a few miles away you will find a radar tracking station used to follow missiles launched along the South Atlantic test range from Cape Canaveral. Mayaguez is the home of the University of Puerto Rico's College of Agriculture and Mechanical Arts and the Federal Agriculture Experiment Station.

Among the other cities and towns you will enjoy visiting are Caparra, where you will find the foundations of Ponce de Leon's house built in 1509; Manati in the heart of the pineapple country; Aguadilla and Aguada, both of which claim to be the site of Columbus' landing in 1493; San German, site of what is reported to be the oldest Christian church in the New World; Guanica, a beautiful beach where American forces landed in 1898; Santa Isabel and Salinas, where restaurants are famous for seafood; Fajardo, a sailing village which is becoming a commercial port; Luquillo which claims one of the world's most beautiful beaches, and Humacao where you will be impressed with the new construction and landscaping.

Community Characteristics

Wherever you go you will be intrigued with the mixture of old world culture and new ideas. For example, there has been quite a controversy as to how to handle the network TV shows on the island. For awhile "I Love Lucy" was shown with the Spanish dubbed in but it turned out that Lucy just wasn't funny in Spanish. On the other hand, Puerto Ricans who don't know much English get a great bang out of "Sergeant Bilko" even though the program is always in English. A complaint comes from the continental kids who say that Cisco Kid in Spanish just isn't the same.

There is a tendency for people from the states on their first visit to Puerto Rico to refer to themselves as "Americans" and this of course upsets the Puerto Ricans who rightfully feel that they are just as American as anyone. The Puerto Ricans refer to citizens from the states either as "continentals" or as "mainlanders."

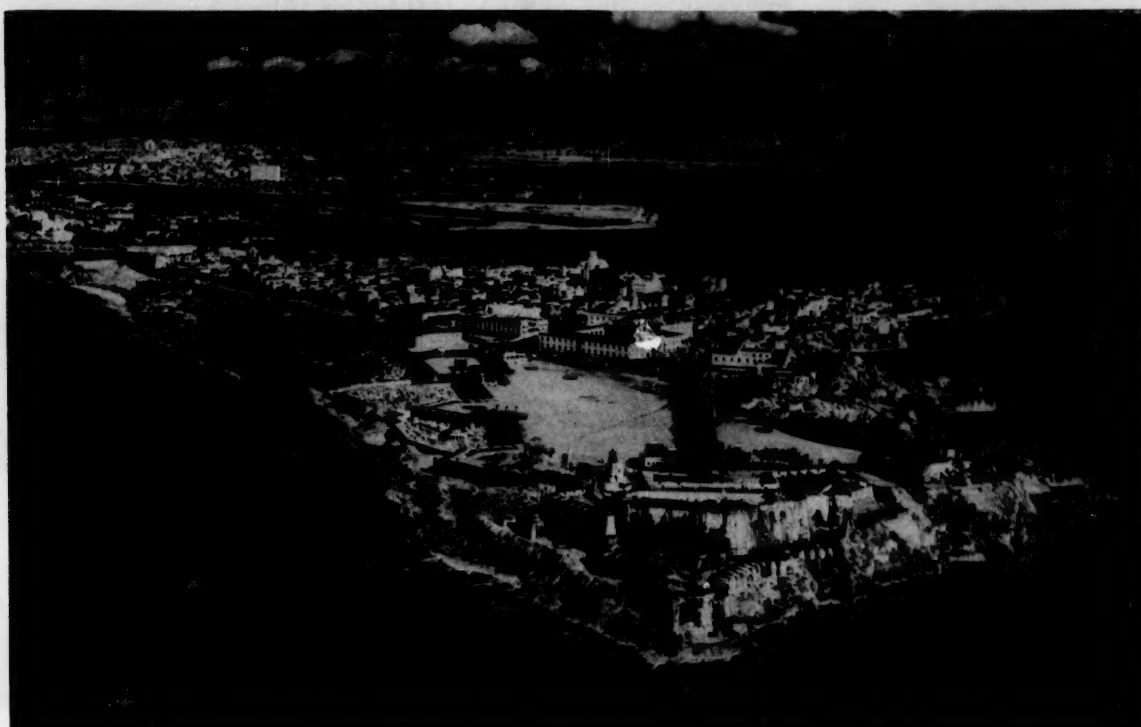
One problem that incoming U. S. families have if they select industrial locations away from San Juan is the provision of adequate schools for their children. Obviously it is not possible for the children to enter Spanish-speaking schools immediately because of the language barrier.

To solve this problem at Ponce, the government has established a Caribbean school for the children of continentals. There are already 160 students enrolled in the modern building. Others send their children to bi-lingual Catholic schools which are found in the major cities.

As far as police and fire protection are concerned, service is generally good



An enthusiastic endorsement of Puerto Rican labor is given by Carey W. Brackin, manager of the Commonwealth oil refinery at Guayanilla on the South coast.



This striking aerial view shows the old section of San Juan in the foreground. Here you may visit ancient fortresses, the Governors' office, or quaint shops offering the products of native crafts.

in the major cities. These services are administered throughout the island by the Commonwealth government and the organization is competent and efficient. Public health services are outstanding.

The housing situation can probably be compared accurately with that in any rapidly growing part of the states. An unfurnished house in San Juan may range from \$100 to \$175 per month and a furnished place will cost \$50 to \$75 a month more. Rentals are lower in the smaller towns.

Existing houses may not be quite as numerous and varied as those generally found on Long Island but you will certainly derive more satisfaction from landscaping here. One U. S. plant manager who has been here several years rates gardening opportunities as one of the prime attractions.

It is not at all uncommon to see a hedge of red Poinsettia higher than a man's head. Anyone can develop a green thumb—even the fence posts send out branches.

Moreover you will find it easily possible to find an outlet here for your

civic and cultural ambitions. You can keep up your membership record in the local Rotary group and your wife can belong to the local women's auxiliary of Elks.

Puerto Ricans are very proud of Cellist Pablo Casals and other artists who make their home here. There are little theatre groups and art festivals for those who are interested.

Recreational opportunities, of course, include all of the water sports as well as sunbathing the year round. And you won't find a more fanatic group of baseball fans anywhere.

There is an impressive new track, El Comandante, where you can watch horse racing near San Juan, and you find the usual assortment of golfing and tennis facilities. This may also give you your first opportunity to watch cock fighting, which is popular on the island.

As to clothing, you will wear here about what you would wear in New York in September. Men usually dress in tropical worsteds and washable suits for business in San Juan offices but slacks and sport shirts are seen frequently.

Your wife will be able to do her grocery shopping in a modern supermarket. And if you want some of the products of native crafts, you will find intriguing shops in Old San Juan.

History

You will also enjoy visiting points of historical interest, in which the island abounds.

On his second voyage to the New World, Columbus discovered the Island of Puerto Rico and took possession of it in the name of Spain (November 19, 1493.) The settlement of Puerto Rico began with Ponce de Leon, later discoverer of Florida and seeker of the Fountain of Youth. He founded the present city of San Juan in 1508.

Settlers kept coming to Puerto Rico from Spain for four centuries. The Indian population gradually disappeared, mainly as the result of absorption into the white Spanish and the early negro population, the latter brought from Africa under slavery.

For four centuries Puerto Rico was a part of the Spanish Empire. In 1812 it was declared to be a province of

Wives of U. S. executives living in this suburb of San Juan buy their weekly groceries at the "Todos Supermercados."



CONSTRUCTION...Modern



This handsome new office of the Supreme Court of Puerto Rico gives evidence of the imaginative approach of government officials.



As Tomorrow

In vast areas of Puerto Rico, slums have been replaced by trim public housing projects. This is the community of Puerto Nuevo.

On an ancient island amid evidence of civilization hundreds of years old you can find striking new projects reflecting the latest ideas in engineering and architecture. Such contrasts add to the fascination of the Commonwealth.

A landmark North of Ponce is this beautiful hospital operated by the Public Health Service. In the foreground is Victor Alamo, EDA representative in Ponce.



PUERTO RICO

Spain on an equal basis with the provinces in the Iberian peninsula. In 1897 Puerto Rico was granted a constitution under which it would have become a virtual Dominion.

Soon after, however, during the Spanish-American war, the United States occupied Puerto Rico. Spain ceded sovereignty over Puerto Rico to the United States under the Treaty of Paris, proclaimed April 11, 1899.

The entry into force of the constitution on July 25, 1952, was the culmination of 52 years of steadily increas-

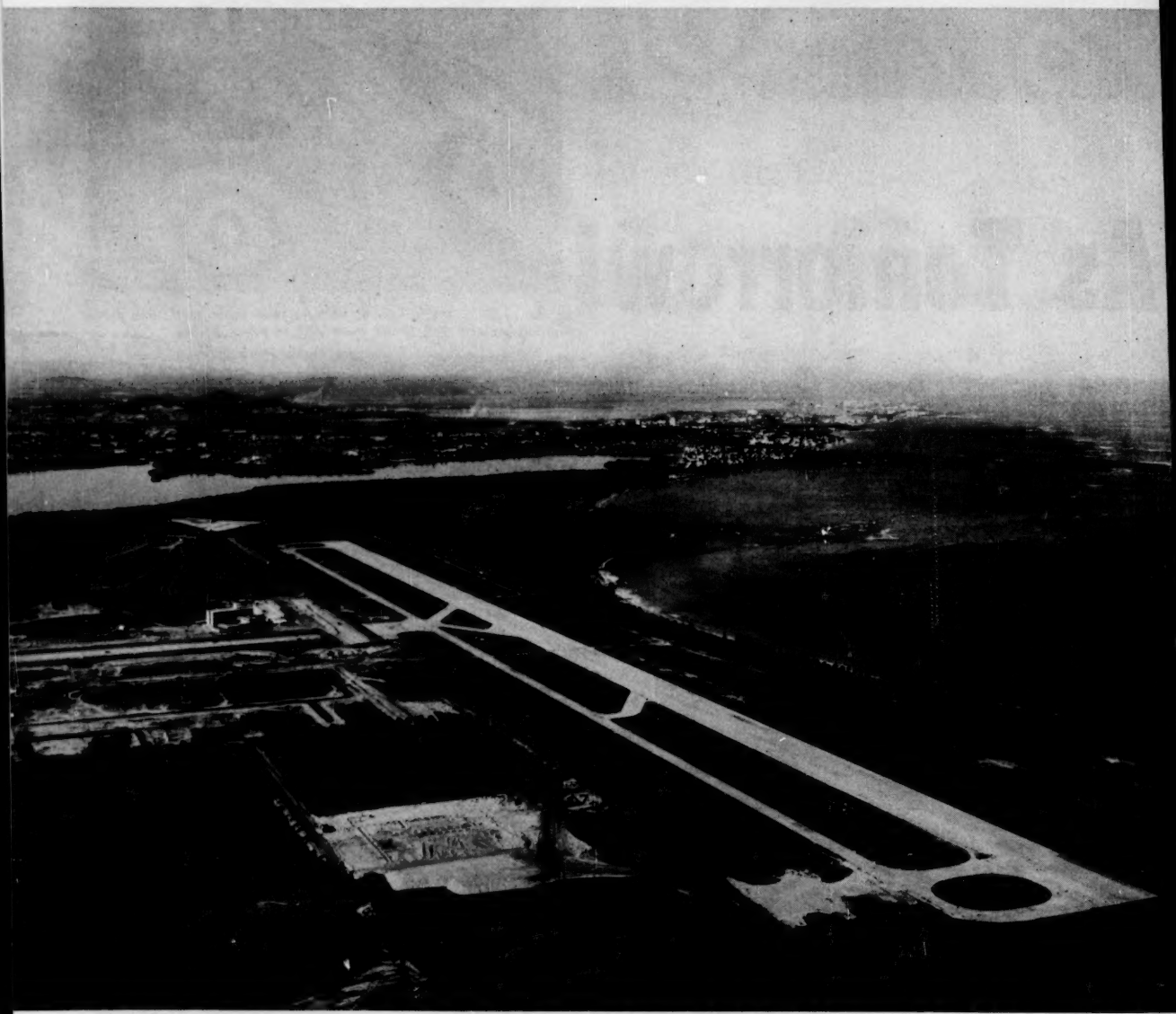
ing local autonomy. Major advances were made in 1917 when Puerto Ricans were declared to be United States citizens and the legislature became wholly elected by popular vote. In 1946 President Truman appointed the first native Puerto Rican to be governor, and in 1948, in accordance with an Act of the 80th Congress, the people of Puerto Rico elected their own governor for the first time.

The act authorizing full autonomy in island affairs under a home-written constitution was passed by Congress in

1950, and ratified by voters in a referendum in June, 1951. The constitution, establishing Puerto Rico as a "commonwealth" of the United States, was approved in an island-wide referendum March 3, 1952, and President Truman signed a Congressional act of ratification July 3, 1952.

Transportation Communications

If you manufacture a heavy, bulky product and your market is in California, Puerto Rico will not be a profitable location for you. But if your trans-



The first view most visitors enjoy is this panorama of the San Juan international airport with the city in the background. The runways are ready for jet traffic and the building is as modern as any you will find anywhere.

portation needs are not unusual and you serve U. S. markets generally, you can probably compete favorably from a plant here.

Sure, distance is a factor. San Juan is about as far from New York as is Denver. And services have not always been good.

But the transportation picture is improving steadily. And some manufacturers have found it cheaper to ship products from Puerto Rico using ocean freighter than to move them overland by rail or truck from mainland plants. For example, a leading shoe producer has reported a cost of 3.5 cents per pair for shipping shoes from here to Missouri, compared to a cost of 4.5 cents from New York.

Such shipping lines as Alcoa, Bull, Lykes, Pope and Talbot, and Waterman provide service between Puerto Rico and New York, Baltimore, New Orleans, Galveston, Jacksonville, San Francisco, and Los Angeles. A Miami route is receiving serious study.

Winter cruises are offered tourists by such famed lines as Moore-McCormick, Swedish-America, Canadian Pacific, Italian, and French. Sailing time from New York is about three and one half days.

Local developers are hopeful that a proposed service between St. Lawrence seaway ports and Cuba may be extended to include Puerto Rico. Also, a strong effort is being made to stabilize ocean shipping rates, which have tended upward in recent years.

One of the most promising developments is the containership box which can be moved inland intact by either rail or truck. This plan makes possible door-to-door service between Puerto Rican and mainland points.

Air Freight Is Popular

Of course, many manufacturers are able to utilize air freight for moving both incoming materials and outgoing products. Locally-based executives of U. S. firms are quick to praise the air service.

One plant manager (in electronics) said "we receive 80 per cent of our incoming materials by air and we ship 100 per cent of our products by air. The service is good and relatively inexpensive."

From New York, San Juan is a five and one half hour hop for propeller aircraft and under 5 hours for the new prop-jets which recently started Puerto Rico service. When full jet service begins in the near future, the N. Y. to

Puerto Rico run will take only 3½ hours. The non-stop flight from Miami is under 4 hours. Some direct flights to Washington, Chicago, Philadelphia and Boston have been inaugurated and improved service to the West Coast is in the offing.

Biggest carriers are Eastern and Pan American via New York and Miami. Delta offers daily flights from New Orleans by way of Cuba, Haiti, and Dominican Republic. BOAC and BWIA connect Puerto Rico and Bermuda.

Competition for tourist and migrant worker traffic has held passenger fares down and it has been possible to fly via Trans Caribbean Airways, Pan American and Eastern one-way between San Juan and New York for as little as \$45. Present first class fares for major carriers approximate \$105.

Your branch plant here very probably will run a slightly higher communications bill than one in the States. A short call to the home office invariably costs \$5 to \$10, and lengthy calls can be quite expensive.

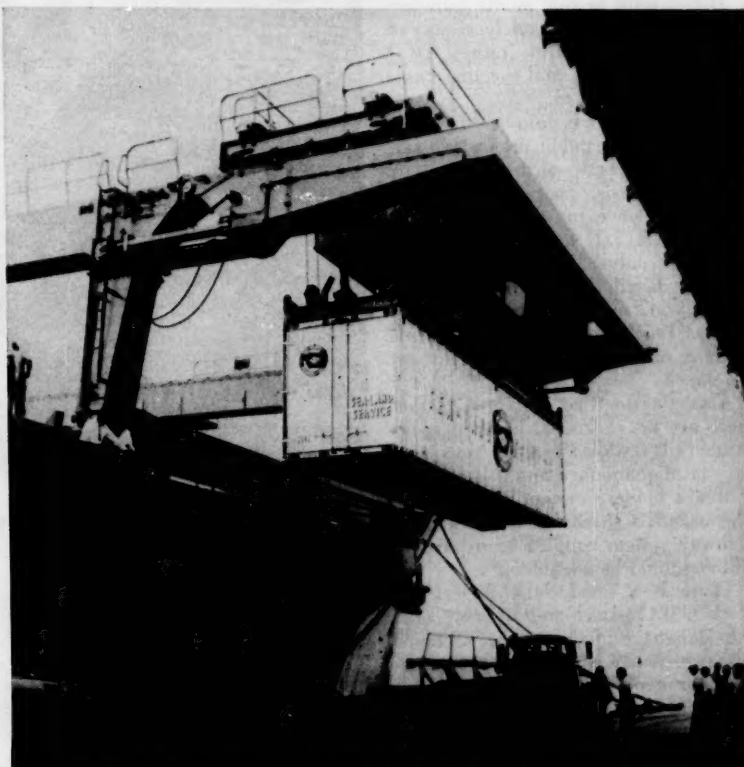
Telephone service has been a major

problem on the island because rapid growth has outstripped expansion of facilities, just as in many areas on the mainland. However, top priority in installation of phones is given Fomento plants and their managers.

Moreover, local units which must maintain frequent contact with mainland offices can trim expenses and improve service by installing teletype machines. And, within the next year or to a major expansion program should begin to show big changes in service both within the Commonwealth and to outside points.

A new \$17 million submarine telephone cable is being laid between Puerto Rico and Florida, with an estimated completion date in 1960. This facility will eliminate the static interference often experienced with present radiotelephone service.

One thing to remember in calling Puerto Rico is that the island lies in the Atlantic time zone, one hour later than Eastern Standard. When it's noon in New York, it's 1:00 P.M. in San Juan.



An important trend in transportation in Puerto Rico is the combination of land and water service as evidenced by Pan-Atlantic Steamship Corporation's "sea-land service." Loaded truck trailer bodies are carried between such ports as New York, Miami, Houston and Tampa.

Another type of zone—postal—must be remembered in handling mail other than first class. For postage, Puerto Rico is just like any part of the United States. This means you can send a first class letter from Puerto Rico anywhere in the states for 4 cents.

It also means that zone rates apply to parcel post. And almost any part of the mainland is in the highest zones from Puerto Rico.

On the island, the transportation and communication situation is also improving rapidly. A system of modern highways, built without interstate highway funds so helpful in the states (but with some Federal financial assistance) is linking major cities. With the completion of this system, it will be possible to circle the entire island in less than a day.

When you arrive here for a site survey, you'll find it easy enough to pick up a rental car (all the usual names) and drive wherever you wish. You quickly learn that a "No Estacionamiento" sign means "No Parking" and "Peligro" means "danger."

If you want to ride public transportation you'll find a good local service airline linking major cities. DC-3 equipment is used, and the line has a perfect safety record.

Another service is unique—the "publicos." These are public cars which carry passengers between major cities on a per seat basis. The rate across the island to Ponce for an entire car is only about \$15. If you go with a group, the fare is only \$2 or \$3.

If you distribute your product on the island, you'll probably have your own trucks. Trucking services comparable to those on the mainland have not yet developed.

Also, Puerto Rico is unique in that there are no railroads. Early narrow-gauge rails installed in sugarcane areas have been abandoned and it is not likely that a modern system will be built. The island is so compact that a good highway system coupled with port facilities should be adequate.

There is a good daily paper, "El Munda," in Spanish and a weekly English language paper. The Spanish language paper is fairly easy to read, even for a novice, but if you are insistent on having a daily paper in English you can of course get the air mail editions from New York only a few hours after they are on the streets of Manhattan.

Because Puerto Rico is experiencing

a few growing pains in the area of transportation and communications should not discourage a prospective plant operator. Scores of plants already operating here have shown that these problems can be resolved satisfactorily.

Such perishables as pineapples are sold in New York markets. Bottles are sold in South America. Cement has been shipped to Florida. A local cigar manufacturer sells practically his entire product in outside markets.



Important strides are being made in building a system of modern expressways between major cities on the island. This is a leg extending South from San Juan.

Utilities—Fuel, Power, Water

As elsewhere, increasing demand for energy parallels industrial development in Puerto Rico. In fact, electric power consumption on the island has since 1940 been increasing at a rate that is 50 per cent faster than on the mainland.

The National Planning Association has reported that electric energy consumption in Puerto Rico expanded fourfold between 1940 and 1954. Resi-

dential consumption has surged forward due both to extension of service to new areas and to increase in family incomes above subsistence levels. Industrial use per employee has also risen rapidly with the establishment of industries having greater capital investment.

Prior to 1940, most of Puerto Rico's power was produced by hydro plants. But, according to present figures, the hydro share has dropped from more than one half to about one fourth of

total output. Spearheaded by new steam plants, Puerto Rico's capacity has jumped from 698,000 to 862,000 kwh in two years.

The entire island is connected by a high tension grid and the system provides the usual single and three phase 60 cycle alternating current at standard voltages.

Power rates here are comparable to those in New England and Middle Atlantic areas where recently-built steam generating stations are the source.

After reviewing probable effects of using fuel oils from local refineries, future construction costs, and finance charges, the NPA concluded that power costs during the next 3 to 8 years would probably continue at about the present level.

Looking farther into the future, there is great interest in the possible use of nuclear energy on the island. Already, AEC has authorized a \$250,000 design study of a proposed boiling water nuclear power plant incorporating a nuclear fired superheater. The Puerto Rico Water Resources Authority has negotiated with General Nuclear Engineering Corporation, Dunedin, Florida, to conduct the study.

That Puerto Rico has high ambitions for atomic energy is evidenced by a fast-expanding research and development program in this field. With AEC support, there is being developed a Puerto Rico Nuclear Center at Mayaguez. This is a training center open to students in all of the American Republics and has already completed four sessions of a radioisotopes training course.

With respect to water, you will find a similar pattern of rapid extension of service in metropolitan areas. For large supplies of industrial water you will probably want to depend on ground water, which is plentiful, or sea water.

Heavy rains fall on the central ridges and drain off on all sides, providing abundant ground reservoirs in almost all sections. But the topography is such that there are no major drainage basins and hence there is a scarcity of good riverfront sites.

All major urban centers have adequate supplies of pure safe water. There is a wide variation in the degree of hardness of the island's water, depending on location. Sewer connections are generally available, and assistance is provided in the disposal of large volumes of industrial waste.

Most manufacturers in Puerto Rico use oil for industrial process heating. Two refineries provide a local source for petroleum products including, from one refinery, commercial LPG.

Proof of the Pudding

Best evidence of favorable plant location factors in any area is the record of manufacturers already situated there. In this respect the Fomento people can offer you an abundance of proof that U. S. firms can operate successfully and profitably on the island.

Just recently, EDA made a survey of 180 firms which have located plants in Puerto Rico in the past several years. They included 41 firms in apparel, 21 in electronic machinery, 18 in textiles, 16 in fabricated metals, 8 in leather, 7 in non-electronic machinery and a variety of others.

It is significant that a majority of these firms (better than 80 per cent) listed tax exemption as the number one locating factor. Other government policies which were applauded were the stability of the administration and the program of making available factory buildings.

More than half of the companies listed wage rates and labor as the second most important factor. In order of importance were the prevailing wage structure, the abundance of young workers, productivity, and good labor relations.

Other factors mentioned frequently by respondents were market considera-

tions, climate, transportation and raw materials.

Invited to suggest ways that the local picture could be made even brighter, firms with plants on the island indicated a desire for less frequent minimum wage hearings. Also they felt that shipping facilities could be improved and costs could be reduced.

This report from EDA can be checked by private interviews with U. S. businessmen who manage plants on the island. One of the most influential spokesmen interviewed by I. D.'s editor was Charles M. Schwab who is president of the Puerto Rico Electronic Industries Association. This is an organization having a membership of about 30 companies engaged in manufacturing electronic components. Among them are such companies as General Electric Instruments, Caribe General Electric, Weston of Puerto Rico, Weller Manufacturing, Vega Alta, and Sunbeam.

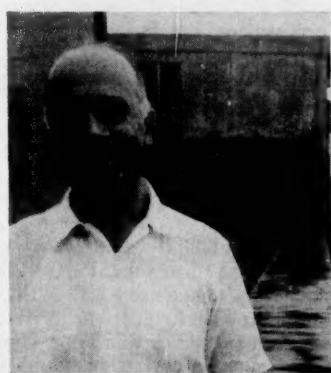
Schwab is president of three associated firms which include Philips Control Corporation of Puerto Rico, established 1952; Phil-Trol Seals Corporation, established 1956; and Circuit Components Corporation, established 1958. All of these companies are wholly-owned subsidiaries of Allied Paper of Chicago—a firm which has electronics operations also in Joliet, Illinois.

Schwab is most enthusiastic about the labor situation in Puerto Rico. "These people have the ability to do anything we have the ability to teach them," he says. "If an outfit is unsuccessful it is due to their own inadequacy as instructors" and not to the people here, Schwab insists.

Among the assets he finds in his labor force, in addition to the quickness to learn, is the strong interest in the job and a very sincere loyalty to the company. Schwab, incidentally, attributes the latter in substantial measure to the absence of union activity.

"Unions build walls between labor and management and so far there hasn't been much of that divisive activity here yet," Schwab says. He points out that his shop is not organized and that few of the companies engaged in such activities have yet experienced union activity.

Obviously one reason for this is the steady improvement in benefits received by the workers. When the electronics industry first came to Puerto Rico a few years ago minimum wages were as low as 45 cents an hour. Subsequently



Enthusiastic spokesman for Puerto Rican development is Charles M. Schwab who moved to the island from Illinois to manage three electronics enterprises.

they have been raised to 70 then to 85, and finally to 88 cents over a period of just three years. The situation is again being reviewed by the Labor Department's division of territorial wage determination and it is likely that the minimum will be raised again shortly. Schwab and others in the electronics field believe the \$1.00 minimum is just around the corner for them.

How does Schwab like living in Puerto Rico? "It's wonderful—my whole family likes it," he asserts. The Schwab family which includes 7 children moved here in March, 1956 and quickly adjusted to local conditions. With a trace of embarrassment Schwab admits that the children have learned to speak Spanish very easily but he hasn't quite made it. This he explains by the fact speaking Spanish is really not necessary since most of the office and supervisory help are bi-lingual.

In the branch plants operated here by management from the states it is customary to have a number two man who is Puerto Rican. These executive assistants are able to solve the language problems and of course there is also an important public relations aspect. In the case of Philips Control the key man is Alfredo Rouseel who is comptroller and personnel director.

Another satisfied customer is D. E. Stixrood, Secretary-Treasurer of Rico Electronics, Inc., who says "We can't be too enthusiastic about both our operation in Puerto Rico and the unusually effective cooperation given by the Economic Development Administration." L. H. Christensen, Vice President of St. Regis Paper and Bag Corporation says "This plant in Puerto Rico is one of the most efficient operations in both quality and output."

Digging deeper, you will find that financial records prove again that most of the branch plants located here are making money for their owners. (EDA officials emphasize that tax exemption is meaningless for the plant that can't earn a profit).

To provide you with the most factual type of information EDA has done something very rare for an area promotion organization—published a report on plants that have closed. This report gives the reasons why failures have occurred and, at the same time, it reveals that the failure rate on the island is very low.

Another study gives some general information regarding the earnings of Fomento units. The data shows, first,

Profit Survey Offers Positive Proof

Net Profits of U. S. affiliates in Puerto Rico in relation to sales are averaging 16.6 per cent, more than three times the U. S. rate of 4.8 per cent. Below is an industry-by-industry profit run-down of EDA-sponsored plants which filed returns for fiscal 1957:

| Industry | Profits In Relation To Sales | | |
|---|----------------------------------|---------------------------|--------------------------|
| | EDA-Puerto Rico Firms (No taxes) | U. S. Firms* Before Taxes | U. S. Firms* After Taxes |
| Food and kindred products | 6.2 | 4.5 | 2.2 |
| Tobacco manufactures | 17.0 | 10.7 | 5.1 |
| Textile mill products | 9.2 | 4.1 | 1.9 |
| Apparel and other finished products | 11.5 | 2.6 | 1.3 |
| Furniture, fixtures and miscellaneous wood products | 17.1 | 4.9 | 2.5 |
| Paper and allied products | 38.9 | 9.8 | 5.0 |
| Printing, publishing and allied industries | 21.3 | 7.3 | 3.8 |
| Chemicals and allied products | 14.6 | 14.4 | 7.7 |
| Rubber and miscellaneous plastic products | 14.8 | 8.2 | 4.2 |
| Leather and leather products | 5.1 | 4.4 | 2.0 |
| Stone, clay and glass products | 13.2 | 13.9 | 7.5 |
| Fabricated metal products | 10.4 | 7.2 | 3.6 |
| Non-electrical machinery | 24.1 | 9.7 | 4.8 |
| Electrical machinery | 42.0 | 8.6 | 4.2 |
| Miscellaneous manufactures | 10.3 | 5.1 | 2.4 |

*U. S. Mainland data—Federal Trade Commission—Securities & Exchange Commission. Quarterly Financial Reports for Manufacturing Corporations.

that for some 210 firms there was an average return of 31 per cent after taxes! At the same time, it is revealed that the first year of operation is likely to run into the red and that faulty analysis of location factors may extend this deficit period over a longer time.

Planning for the Future

It is already possible to identify some of the trends which will undoubtedly assume great significance in the future industrial development of Puerto Rico. These include the establishment of Industries with high capital investment and the beginning of industrial integration.

With an intelligent promotion program, it is anticipated that Puerto Rico will continue to outpace the U. S. in industrial growth. Evidence is that the island economy is expanding at about 10 per cent per year which is about three times the average for the U. S.

And, it should be emphasized that EDA personnel are not content to wait for what comes naturally. There is a very aggressive program of feasibility

studies designed to ferret out specific opportunities.

The conduct of such studies is being carried on aggressively and extensively by the research department headed by Hu Barton. His right-hand man on these projects is Morris Moses, an economic consultant who spent several years doing similar work in Germany and France in the old ECA program.

One of the best examples of the payoff in this type of work is found in the development of a new industrial complex based upon a flour mill. This is a classic case of creating a whole group of new industries from the very first germ of an idea through to actual operation.

From research studies begun about 5 years ago by Barton there grew an idea that Puerto Rico could support a complex of industries including such inter-related units as a flour mill, a feed mill, a vegetable oil mill, fish packing plant, poultry and meat packing operation and a variety of related activities such as bakeries, fertilizer plants and agricultural activities.

The first "break through" occurred about a year ago with the establishment of the flour mill by Nebraska Consolidated Mills Company, Inc. This facility, Molinas de Puerto Rico, is already a landmark on the waterfront at San Juan.

The flour mill is now being followed by a soybean oil mill being located by Tropical Foods, Inc. This is a syndicate of Cleveland, Ohio businessmen headed by John Dickson. Plans have been completed and construction will begin shortly.

The third unit in the complex has already been planned and will soon be underway. This is a meat packing plant in which the key man is a Little Rock, Arkansas executive named Finkbeiner. Adding to the complex are a poultry processing plant already in operation and another underway.

Also contributing is the tuna canning plant of National Packing Company (VanCamp) at Ponce on the south coast. Still another such unit will be added soon at Mayaguez by Starkist Tuna.

More Studies Coming

Encouraged by the success of the flour mill complex feasibility study, the EDA research department is going all out on additional projects. Economist Moses is particularly enthusiastic about the opportunity for a major synthetic fiber installation.

"A synthetic fiber plant in Puerto Rico is feasible even if all raw materials are imported and the entire product is exported, without even considering the tax exemption," Moses asserts.

Discussing the feasibility study program Moses emphasizes that it is not unusual for the EDA research staff to advise against location of a plant in Puerto Rico. Local officials don't want failures and they are very cautious in recommending new units, he says.

(Perhaps this explains why the word "promote" has a good connotation here. The word is used almost universally and every time a new unit has been located here it is classified as having been "promoted.")

Puerto Rico may soon have an important new mineral industry as a result of another Fomento experiment. About three years ago EDA officials began thinking seriously about the possible utilization of marble deposits reported on the island. This resulted in a grant of \$15,000 to a local firm to ex-

plore the deposits and remove samples. Just a few weeks ago the first large block of marble was taken out by Continental Marble Company of San Juan.

First indication is that the Fomento people have struck it rich again. The Puerto Rican marble has a good appearance, indicates good structural qualities, and apparently the deposits are substantial. Already, efforts are underway to open markets in the architectural field for dimension marble and to explore by-product applications such as roofing granules and aggregates used in chicken feed and other products.

Another of Moscoso's pet projects right now is the luring of a tire factory to the islands. This market is growing and EDA researchers can see no reason why such an operation would not be successful. He points out that "There are no raw materials in Akron and they're doing all right."

Another trend that will undoubtedly be seen in the near future is the rapid expansion of industrial development activities at the local level. Moscoso is already working to encourage the establishment of local chambers of commerce and development groups like those throughout the states. In this connection he has already organized a governors committee for industrial development which brings together key executives and officials representing important interests on the island.

Still another trend is the development of "home grown" industries. There are an encouraging number of new enter-

prises launched by local people on their own initiative and with their own capital.

One such operation is Puerto Rico Metallic Works, Inc. established in 1956 near Ponce. This company does sheet metal work and is engaged principally in manufacturing aluminum jalousies which are marketed on the island. There are some 20 to 25 employees working in a well planned new plant with modern materials handling equipment. The plant, incidentally, was the design of one of the owners, Efraim Vassallo, who received his engineering education in the states.

Some indication of the overall growth to be expected in Puerto Rico is found in forecasts prepared by the EDA staff. This study suggests that total manufacturing income will increase from a little over \$200 million this year to \$1.3 billion in 1975. Net income per worker will increase from some \$2,000 this year to more than \$4,600.

EDA officials predict that there will be 100 to 200 new plants starting operations each year hereafter and the total number of Fomento units in operation by 1975 will exceed 2,500.

Moscoso sees Puerto Rico development somewhat along the lines of Switzerland—a small country with a high level of income and a high standard of living. Peering into the future he says "If I was head of a U. S. firm I would be sure to take a look at Puerto Rico before I did anything."



Not all new enterprises have come to Puerto Rico from outside. Typical of "home grown" firms is this metal fabricating plant operated by the Vassallo family at Ponce. Here Felix Vassallo checks a shipment of aluminum windows leaving the plant.



Puerto Rico's industrial "ambassador" on the mainland is Rafael Durand (left) who directs EDA continental operations from 666 Fifth Avenue, New York. Durand has a staff of plant location specialists (some of them shown at right) who'll be happy to visit your office to discuss opportunities for your firm in Puerto Rico.

Puerto Rico At Your Fingertips

If you want details about opportunities for your firm in Puerto Rico all you have to do is pick up the phone and call the EDA office nearest you. The Continental Operations Branch, headquartered in New York, also maintains units in Chicago, Los Angeles and Miami. Traveling representatives cover almost every state of the union.

The EDA will be happy to send a representative to see you to outline industrial incentives available to you under the Boot Strap program. He will probably be able to tell you immediately if you could qualify for tax exemptions. Moreover, EDA personnel can usually give you an expert opinion as to whether the operation you have in mind for Puerto Rico is economically feasible.

If special economic data is needed, EDA will gather material from the technical staff in New York or in San Juan. Then if the venture looks promising arrangements will be made for you to visit the island and get further information on plant sites, labor, and other factors.

The organization is geared to give you quick, businesslike service. It was possible for one California manufacturer in light industry to start operation in Puerto Rico within 120 days after his first contact with the EDA office in Los Angeles.

If you would like to have the red carpet unfurled for you, contact one of these offices.

Mr. Robert A. Grey, Puerto Rico Economic Development Administration, 666 5th Avenue, New York 19, N. Y.

Mr. Adrian Serrano Lucchetti, Puerto Rico Economic Development Administration, 5525 Wilshire Boulevard, Suite 216, Los Angeles, California.

Mr. Guillermo Romanat, Puerto Rico Economic Development Administration, Du Pont Plaza Center, Suite 709-12, Miami, Florida.

Mr. James Fernandez, Puerto Rico Economic Development Administration, 79 West Monroe Street, Room 619, Chicago, Illinois.

If you would like to read some background material preliminary to undertaking a site survey you will find an abundance of data available in convenient form. Here are some of the reports you may obtain from the EDA office in New York:

REPRINTS AVAILABLE

The foregoing 32 page editorial survey was conducted under the auspices of the Economic Development Administration of Puerto Rico. Reprints are available gratis from Neil E. MacMillan, Continental Operations Branch, 666 Fifth Avenue, New York 19, New York.

PUERTO RICO PROFITS AND YOU: An illustrated 16 page color booklet. Describes profit position of over 500 U. S. plants in Puerto Rico. Compares net profits of Puerto Rico tax exempt plants with industries in the Continental U. S. Includes electrical products, apparel, plastics, chemicals, and metal working.

APPAREL MANUFACTURER: Puerto Rico's largest single Bootstrap industry, is described in detail in this 30 page special section. Includes latest trends, future potential, and on the spot report by the editor.

CHEMICAL CORN EXCHANGE BANK SURVEY: Recently issued, this economic survey analyzes the key indicators—manufacturing, transportation, banking, finance, agriculture, and trade. Reviews ten year progress. 12 pages.

GUARANTY SURVEY: Published by the Guaranty Trust Co., this report analyzes Puerto Rico's industrial and commercial resources during the past fiscal year.

NATIONAL PLANNING ASSOCIATION: What will Puerto Rico's economy be like by 1975? Answers are supplied by Teodoro Moscoso, EDA Administrator. In a by-lined article, "Puerto Rico: A Look Into The Future."

INDUSTRIAL INCENTIVES ACT OF 1954: The base of Puerto Rico's development program is fully explained. Lists eligible industries, incentives, provides analysis of the Commonwealth's relation to the U. S. 30 pages.

TAX ASPECTS OF OPERATIONS UNDER THE PUERTO RICAN EXEMPTION PROGRAM: Noted tax attorneys Harry J. Rudick, Professor of Law at New York University, and George S. Allan, Lord, Day, & Lord, analyze the tax exemption program and significance to U. S. manufacturers and investors. 35 pages.

REPORT ON METAL WORKING: On the spot report by the editors of American Machinist. Outlines growth of this U. S. industry in the Commonwealth and profit trend. Goes into full detail on what it is like for Statesider to live and work in Puerto Rico. Clubs, schools, recreation, living costs, etc.

ELECTRICAL PRODUCTS SURVEY: Prepared by EDA's Office of Economic Research, this survey describes growth, profits, and potential. Similar reports are available for the plastics and chemical industry.

SUDDENLY, EVERYBODY'S GOING TO PUERTO RICO: For the tourist, and also for investors planning to do business in Puerto Rico, this handsome all-color brochure goes all out to describe the scenic highspots and resorts of the island.

Manufacturers record

NATIONAL MAGAZINE OF PLANT LOCATION NEWS

EXPANSION BRIEFS

TRONA, CALIF. American Potash & Chemical Corporation has announced plans to construct the first large-scale commercial plant to produce boric oxide. To be located at the main plant here of the company, the new unit is expected to be in production the latter part of this year. The project will cost approximately \$800,000. Boric oxide is used in manufacturing high-energy fuels, as well as in various industrial applications.

MEMPHIS. A new multimillion-dollar sodium and chlorine unit at Du Pont's facility here is now in operation. Completion of the project increases the company's capacity for these chemicals by about 50 per cent. Two other major projects here for Du Pont are a plant to produce "oxone" monopersulfate compound and increased production facilities for hydrogen peroxide. These three expansions have created about 200 new jobs at the plant.

EDGEWATER, N. J. Construction is under way here on a new calcining plant for the Barrett Division of Allied Chemical Corporation. It will have the largest bulk ship unloading facilities in New York harbor, with a capacity up to 900 tons an hour. The new facility will crush and grind gypsum ore and pass it on to the adjacent gypsum plant now in operation.

PITTSBURGH. H. K. Porter Company, Inc., has formally opened its new 18-story office building here. The aluminum-clad structure has 200,994 square feet of commercially usable floor space. It replaces a group of small buildings which were on the same location at Grant Street and Sixth Avenue.

TAMPA. Florida Nitrogen Company, new and wholly-owned subsidiary of Southern Nitrogen Company, Savannah, has announced beginning of construction of a \$3 million plant near Tampa. Subsequent planned developments by the company here will involve a total investment of about \$7 million. The plant will employ approximately 100 persons with an annual payroll of some \$600,000.



Eyeing a new plant site?

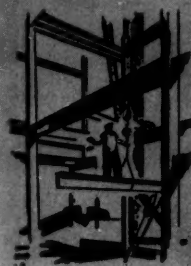
The Texas Power & Light Company invites expanding industry, large or small, to make use of the services of its staff of specialists—skilled and experienced in serving officers and executives of industrial corporations. Without obligation, your particular location problems will be carefully and thoroughly analyzed by those having broad knowledge of industry and facts pertaining to manpower, materials, resources, finance and other important factors in Texas.

Write, wire or call J. D. Eppright, Director, Industrial Development Division, Texas Power & Light Company, Dallas, Texas. Inquiries held in strict confidence.

Booklet detailing plant location services sent on request.



**TEXAS
POWER
& LIGHT
COMPANY**



NEW PLANT SUMMARY

BY DONALD V. QUINN

The following is a summary of major industrial plants reported to **INDUSTRIAL DEVELOPMENT** during the month of December, 1958, by industries and industrial development organizations in the United States, Canada, and territories.

Number of employees is indicated by the code: A (under 25); B (25-100); C (100-250); D (250-1,000); and E (over 1,000).

ALABAMA

Anniston—Anniston Star; Col. Harry M. Ayers, Pub., West 10th St.; Newspaper Plant. Est. date of Oper. Sept. 1959. \$1 million. (B)

Birmingham—Hanchett Mfg. Co.; Kent S. Hanchett, Pres., 5th Ave. S & 31st St. Whse. & Serv. ctr. Saw sharpeners, knife grinders, Etc. Est. date of Oper. Jan. 1959.

Haleyville—Marshall Durbin Co.; Hatchery. Plans announced. \$180,000. (B)

Jasper—The Pillsbury Co.; Push-button feed plant. Plans announced \$1 million. (B)

Marion—Marion Bi-Flex Corp.; Lingerie. Plans announced. \$175,000. (D)

ALASKA

No plants reported.

ARIZONA

No plants reported.

ARKANSAS

Clarksville—Arkla Gas Co.; Plans announced. \$15 million.

Corning—Corning Rice Growers Assn.; O. L. Woods, Chm. of Bd. Small-grain drying & storing Plant. Est. date of Const. Jan. 1959. \$500,000.

Dermott—Potlatch Forests, Inc.; Robert E. Bundy, Pres., Bleach board & Pulp mill. 100 acres. \$35 million.

Little Rock—Capitol Bldg. Invest. Corp. Claude Carpenter, Jr., Pres. Plans announced.

N. Little Rock—Esso Standard Oil Co.; Term.-Recvs Petrol. Prod. from pipeline of Texas Eastern Transmission Co. 20 acres. \$276,000.

Stuttgart—Stuttgart Footwear, Inc.; Footwear. Plans announced. (C)

Van Buren—Farmers Co-operative of Van Buren. Jack White, Mgr., Kibler Rd. Soybean plt. Est. date of Const. Jan. 1959. \$450,000. (B)

CALIFORNIA

Burlingame—Coen Co.; Rollins & David Rd., Oil & Gas Burners. Plans announced. 26,000 Sq. Ft.

Burlingame—Edward J. Roberts Co.; Edward J. Roberts, Pres., Dist. of Carpets. Est. date of Oper. May 1959. 25,000 Sq. Ft.

Compton—Carlson Products Corp.; Richard Kress, Gen. Mgr. 250 E. Manville Rd. Plastic pipe & fittings. In oper. 35,000 Sq. Ft.

Dominquez—Calvideo Tube Corp. Stephen Tidik, Pres. HO: Los Angeles. TV Tubes. Const. Compl. 40,000 Sq. Ft. \$400,000.

Fresno—Buckner Mfg. Co.; Harry E. Cleason, Pres., Lawn sprinklers and Rel. prods. Est. date of Oper. June 1959. \$300,000. (B)

Fresno—State Office Bldg. Tulare St. 5-story office bldg., plans announced. \$3 million.

Goshen—Cal. Bean & Grain Cooperative; Robert Kopenhaven, Temp. Chm. Goshen Ave. Bean processing. Plans announced for Const.

Oakland—Barnes Mfg. Co.; Port of Oakland Ind. Park. Under Const.

Palo Alto—Ampex Corp.; Geo. I. Long, Pres., Stanford Ind. Park. Magnetic tape recorders. Est. date of Comp. 1960.

Palo Alto—Grebmeier Mfg. Co.; Rolf Grebmeier, Owner. San Antonio & Middlefield Rd. 2-story office bldg. Plans announced. 17,400 Sq. Ft.

San Francisco—Cherokee Vineyard Assoc.; Woodbury Rd. 40,000 Sq. Ft. wine bottling Plt.

San Francisco—Wells Mfg. Co.; Donald A. Wells, V. Pres. San Francisco Ind. Park. Electrical equipment. Plans announced. \$300,000.

Stockton—Army Ionizing Radiation Ctr.; Sharpe General Depot. Research ctr. Est. date of Oper. July 1960. \$Multi-million.

COLORADO

Englewood—Stainless Equipment Co.; Victor Molitor, Pres. Commercial food serv. equipment. Under Const. \$200,000. (D)

Louisville—Louisville Wood Prod. Co.; Gilbert C. Hadden, V. Pres. Wood pallets. Est. date of Oper. Dec. 1959.

Wheat Ridge—Expanded Shale Prod. Co.; R. E. Leggett, Pres. W. 43rd Ave. & McIntyre St. Lightweight cement blocks. Plans announced.

CONNECTICUT

Oakville—York Lounge Co.; Bedding. Plans announced. 200,000 Sq. Ft. (B)

DELAWARE

Wyoming—Wyoming Block Co.; Joseph Dimonde, Plant Off. Cement block and prestressed concrete. Est. date of Oper. April 1959. \$150,000 (B)

DISTRICT OF COLUMBIA

No plants reported.

FLORIDA

Ft. Myers—Texas Crystals; Leo Hodgeman, Pres. Radio Crystals. Est. date of oper. April 1959. \$25,000. (B)

Tampa—Camden Grain Co.; Samuel Addison, Plant Off. Animal feed. Plans announced. 2 acres. \$400,000. (A)

GEORGIA

Atlanta—American Art Metals Co.; Fulton County Ind. Dist. Plans announced. \$995,000. 57 acres.

Augusta—Continental Can Co.; Lucius D. Clay, Chm. Bleached sulfate paperboard & paper. Plans announced. \$45 million. 2,600 acres.

Augusta—Wilson Shirt Co.; Maxwell J. Estroff & Jack E. Fink. Plant Off. Gordon Hwy. Fatigue clothing & Shirts. Est. date of Oper. April 1959. (D)

Jackson—Kym Co.; Garments. Est. date of



H
HONEYWELL

CONTINENTAL OPTICAL COMPANY

THE **AEROSONIC**
INSTRUMENT CORP.

SPERRY

MET-L-HOL

GALLAGHER COTTON MILLS

RADER AND ASSOCIATES
ENGINEERS AND ARCHITECTS

CREST
DIVISION OF JACQUES KREISLER CO

THE **BABCOCK & WILCOX**
BOILER DIVISION

THE **BABY BUTLER**
ELEVATORIZED

A-M-P
Hood

Glance Engineering Corporation

FLORIDA FISHING TACKLE Mfg. Co. Inc.
Barracuda
BRAND

Carmichael Fashions

GE
Metal Industries, Inc.

THE HOUSTON CORPORATION

ALLSTATE
INSURANCE COMPANY
GENERAL NUCLEAR ENGINEERING CORPORATION

TAPECO
Smith and Gillespie

MAKE YOUR MARK

*in greater
St. Petersburg*

where work and play are combined —
PROFITABLY!

Join these 24 major business firms who have located in this area. Qualified workers, excellent schools, recreational and cultural activities, fine transportation, well-balanced industrial and commercial growth, outstanding community spirit and progressiveness . . . an ideal area in which to locate *your* industry. Write today for detailed literature.

Note: Persons seeking positions please write Florida State Employment Service, 1004 First Avenue North.

ST. PETERSBURG CHAMBER OF COMMERCE

Jack Bryan, Industrial Director

Dept. ID

St. Petersburg, Florida



To manufacturers of . . . ELECTRONIC and ELECTRICAL EQUIPMENT

IN YOUR LONG RANGE PLANNING for the next 5 to 20 years, you have probably included a forecast on your engineering manpower requirements.

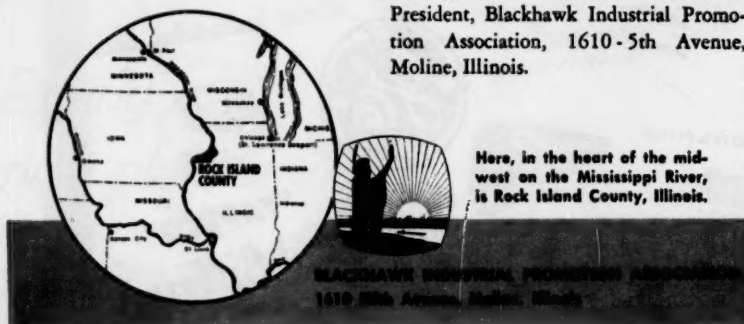
Whatever your requirements may be in this category, we have information available that can be helpful to you.

For example: *In the next 5 years 4924 students will graduate with BS degrees in Electrical Engineering from major*

colleges and universities in a 150 mile radius of Rock Island County, Illinois. (Fact No. 1 from our current survey.)

This survey includes many other facts that pertain to this kind of professional manpower: its availability, job preference, job location; also the institutions with laboratory and experimental facilities available to industry in this area.

You are invited to write to us for a copy of the complete up-to-date report. Address John A. Smithers, Executive Vice President, Blackhawk Industrial Promotion Association, 1610 5th Avenue, Moline, Illinois.



Thinking about locating a plant in Ohio, Indiana or Illinois? Then check Nickel Plate's survey service.

NKP has information on available sites—plus facts on utilities, taxes, transportation and other data you'll need to know. In fact, every NKP survey is tailor-made to your requirements.

Let NKP know those requirements. Please contact M. H. Markworth, Nickel Plate Road, 1405 Terminal Tower, Cleveland 1, Ohio. MAin 1-9000.

I had to find a plant site...
NKP SURVEYS MADE MY JOB EASIER



NEW PLANTS

Oper. Spring 1959. 25,000 Sq. Ft. Bldg. Lyerly—Georgia Rug Mills. HO: N. Y., N. Y. Plans announced. \$1 million. Swainsboro—New York Rubber Corp.; P. D. Ash, Chm. of Bd. E. Main St. Inflatable rubber life rafts. Etc. Plans announced. 70,000 Sq. Ft. (B)

HAWAII

No plants reported.

IDAHO

No plants reported.

ILLINOIS

Chicago—De Laval Separator Co.; W. A. Neumann, Jr., Pres. 5724 N. Pulaski Rd. Plans announced.

LaSalle—Illinois Valley Container Corp. Wm. Meagher, Off. Est. date of Oper. Jan. 1959. (B)

Modoc—Kaiser Aluminum & Chemical Co.; HO: Oakland, Calif. Plans announced.

INDIANA

Columbus—Cummins Engine Co.; Est. date of const. Jan. 1959. \$6.5 million.

Jasper—Pomeroy Mfg. Co.; H. L. Philippe, Gen. Manager. State Hwy. 45, South. HO: Vincennes, Ind. Cartons, boxes & Kindred prods. Plans announced.

Madison—C. G. Conn, Ltd. L. P. Greenleaf,

Industrial Buildings Report Re-scheduled For April Issue

The special section on industrial buildings, originally scheduled for the February issue of Industrial Development and Manufacturers Record, has been rescheduled for the April issue. This will allow more time for the staff of the magazine to gather a greater amount of editorial material for the comprehensive report.

Pres. Musical Instr., Electronic organs. HO: Elkhart, Ind. 30 acre site purchased.

Valparaiso—Indiana Steel Products Co.; Robert F. Smith, Pres. Indiana Hwy. & Evans Rd. Material used in the mfr. of permanent magnets. Plans announced. \$1 million.

IOWA

No plants reported.

KANSAS

Abilene—Insul-Panel, Inc.; New type bldg. panels—fire, moisture, sound proof. Plans announced. (B)

Burrton — State Industries, Inc.; Oscar Friend and Son Bill, Plnt. Off. Travel trailer. Plans announced. (B)

Coffeyville — Sherwin-Williams; Barium monohydrate. Est. date of Oper. Jan. 1959.

KENTUCKY

Hopkinsville—Colonial Baking Co.; Wm. Krauth, Pres. Skyline Drive. HO: Nashville, Tenn. Wholesale bakery. Est. date of Oper. Spring 1959. (B)

Louisville—Ashland Oil & Refining Co.; Plans announced.

Louisville—Kentucky Rural Elec. Co-operative Corp.; Office & Whse. Shop facilities. Under Const. \$500,000. (C)

Mayfield — General Tire & Rubber Co.; HO: Akron, Ohio. Tires. Plans announced.

LOUISIANA

Englewood — Pelican State Lime Corp.; Anthony & John Guarisco, & Roland A. Verret, Jr. Plnt. Off. Lime. Est. date of oper. March 1959. (B)

New Orleans—Jahncke Serv. Inc.; Paul Jahncke, Pres. 925 S. Dupre. Bldg. Materials yard. In Oper. 12 acres.

MAINE

No plants reported.

MARYLAND

Baltimore—Atlantic Prestressed Concrete Co.; W. E. Potts, Pres. 1310 Chesapeake Ave. Prestressed Concrete beam & panels. HO: Phila., Pa. Under Constr.

Pocomoke City—Pocomoke Garment Co., Inc.; Garments, men's pajamas. Est. date of Oper. Dec. 1959. (B)

MASSACHUSETTS

Charlestown—American Sugar Co.; 425 Medford St. Est. date of Oper. 1960. \$2 million. (D)

Framingham—Computer Controls Co., Inc.; Commonwealth Ind. Park. Manufacture electronics components. Est. date of Oper. July 1959. 20,000 Sq. Ft. (B)

New Bedford — J. Curry Mendes Corp.; Donald G. Conley, Pres. Ind. Park. Automatic paperhandling equip. 10,000 Sq. Ft. Est. date of Oper. May 1959.

Pittsfield—E. D. Jones Corp.; S. Harley Jones, Pres. Hubbard Ave. Paper machinery. Plans announced. 100 acres.

Somerset—New England Power Co. Irwin L. Moore, Pres. Generating Plnt. Under Const. \$200 million.

MICHIGAN

Bay City—Dow Chemical Co.; Linear polyethylene plt. Under const.

Holland—H. J. Heinz Co. C. B. McCormick, Plt. Mgr.

St. Joseph—Huron Portland Cement Co.; Paul H. Townsend, Pres. Cement Dist. Const. in 1959. \$1 million.

MINNESOTA

No plants reported.

MISSISSIPPI

Carthage—Arbor Acres Farms; Hatchery. Plans announced. (B)

Crystal Springs—Gen Co. Inc.; Furniture. Plans announced. (B)

Forest — Bowman Ind. Inc.; Processing broilers. Est. date of Oper. early 1959. (B)

Hattiesburg — Merchants Co.; W. W. Wright, Pres. James St. Chicken processing. 18 acres. Plans announced.

Holly Springs—Clay Products Co.; Kelso Kight, Partner. Bricks. Est. date of Const. early 1959. (B)

Louisville—Borden Foods Co. Milk recv. statn. Plans announced. \$85,000.

Meridian—Dixie Fertilizer Co.; Fertilizer. Est. date of Oper. Dec. 1959. \$1 million. (B)

Shuqualak—Atlas Tile & Brick Co. L. C. Guillot, Pres. Glazed tile & Bricks. HO: Jackson, Miss. Plans announced. \$1 million. (C)

Taylorsville—Poultry Prod. Inc.; poultry Process. Plans announced.

Vicksburg—Holiday Boats; Donald R. Botkin, Plnt. Off. Steel hull cruising houseboats. Plans announced.

MISSOURI

Ava—Sentinel Wood Treating, Inc.; HO:

March, 1959

Ashland, Mo. Est. 2nd Plnt. in Ava. 10 acre site. (B)

Joplin—Marley Co.; Leon T. Mart, Pres. Ind. Park. Parts for water cooling towers and air conditioning. Plans announced. (B)

Kansas City—U. S. Plating Inc.; 623 Southwest Blvd. Replating automotive parts. Plans announced. (B)

Macon — Missouri Farmers Assn.; Wm. Jack O'Brien, Gen. Mgr. Meat packing plnt. Est. date of Const. March 1959. \$400,000. (B)

St. Louis—Garvey Corp.; Ronald Duke, V. Pres. 9804 Page Blvd. Marking equip. & Shipping room spls. Est. date of oper. Spring 1959. 20,600 Sq. Ft.

St. Louis—Gulf Oil Co.; 3854 South 1st St. Water serv. bulk plnt. Under const. \$1¼ million.

MONTANA

Billings—Coca-Cola Bottling Co. 4th Ave., N. & 12th St. Soft drinks. Under Const. nounced. 13,500 Sq. Ft.

NEBRASKA

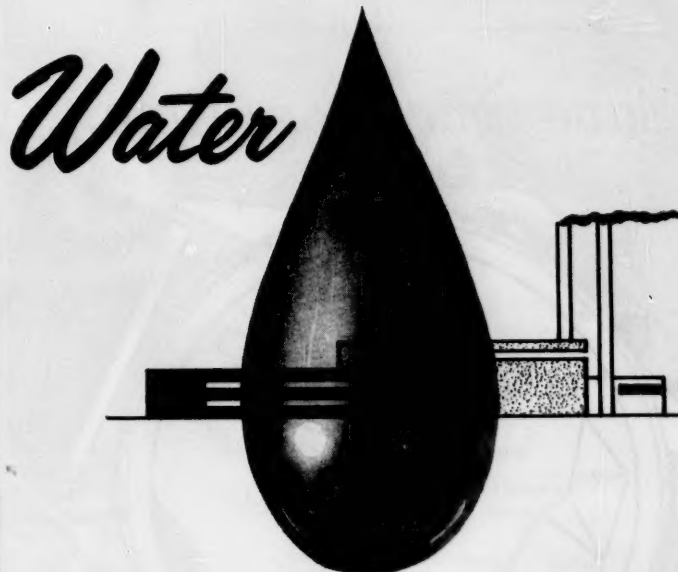
Deshler—Reinke Mfg. Co. Richard Reinke, Pres. Laminated arches for bldgs. Plans an- S. Omaha—Cudahy Packing Co. Louis F. Long, Pres. Slaughtering, process. etc. Est. date of Const. 1959. \$4.5 million.

NEVADA

No plants reported.

NEW HAMPSHIRE

No plants reported.



Plenty of it . . . Almost any place in the state.

It makes Alabama a preferred location for industries requiring large quantities of water for processing.

For full information on locations with the human and physical resources required for your new plant write

INDUSTRIAL DEVELOPMENT DIVISION

Alabama Power Company

Helping Develop Alabama

Birmingham 2, Ala.

NEW PLANTS

NEW JERSEY

Clifton—Chas. Pfizer & Co.; Jos. F. Hanlon, Br. Mgr. 230 Brighton Rd. Eastn. distr. ctr. In Oper.

E. Newark—Booty Resineers; Robert Cerstacker, Mgr. Phenolic resins. Plans announced. 25 acres.

Elizabeth—Lee-Story Co. (Subs.) York St. HO: Brooklyn, N. Y. Millwork & hardboard fabr. plnt. Plans announced. \$500,000. 2½ acres. (B)

Palmyra—Sherman Car Wash Equip. Co.; F. Wm. Thacher, Jr., Pres. Car wash equip. Plans announced. 60,000 Sq. Ft. (B)

Paulsboro — Dixon Chem. Ind.; Sulfuric acid. HO: Newark, N. J. Plans announced.

Roseland—Champlain Co., Inc.; Hans D. Smith, Co. Controller. Harrison Ave. Roto-

grave printing presses. Est. date of oper. Jan. 1959. 80,000 Sq. Ft. (D)

Secaucus—Sinclair & Valentine; Matt J. Leckey, Pres. Sinal & Secaucus Rd. Printing inks. In Oper. \$500,000. 50,000 Sq. Ft.

Swedesboro — A. H. Wirz, Inc.; Ashton Ave. HO: Chester, Pa. Collapsible tubes & plastic molding. Under consideration. (B)

Woodlawn — Cincinnati Fruit & Extract Works, Inc.; Alfred I. Strauss, Jr., Pres. Glendale-Milford Rds. & Wayne Ave. Processing. Plans announced. \$500,000.

NEW MEXICO

No plants reported.

NEW YORK

Kingston—Kingston Knitting Mills; Whse.

Est. date of Comp. May 1959. \$1 million.

Syracuse—Carrier Corp. Saline-water conversion-direct freeze process. Plans announced.

Upton—Brookhaven National Lab. Medical research ctr. In Oper. \$6.5 million.

NORTH CAROLINA

Charlotte—Shamrock Matches; Plans announced.

Granite Falls—Hemlock Mfg. Co. Est. date of const. Jan. 1959. 23,000 Sq. Ft.

Laurinburg — Midwest Electronic Co.; U. S. 501. Est. date of Const. Jan. 1959. \$1.5 million. (D)

NORTH DAKOTA

No plants reported.

OHIO

Baltimore — The Glidden Co.; Geo. M. Halsey, V. Pres. Inorganic Chem. Res. and Dev. Cen. Plans announced. \$1,000,000.

Bridgeport — Gen. Oxygen Supply Co.; Anton Godez, Secy.-Treas. & Gen. Mgr. National Rd., Stop 22. Compressed acetylene gas. Est. date of Oper. mid-1959.

Cincinnati — Pepsi-Cola Co.; Alfred N. Steele, Pres. of Bd. 2121 Sunnybrook Dr. Plnt. & Offices. In Oper. \$3 million.

Cleveland—East Ohio Gas Co.; Robert W. Ramsdell, Pres. E. 6th St. at Rockwell Ave. Underground Storage Facilities. Plans announced. \$1.5 million.

Columbus—Denison Hydrodynamics Res. Ctr. Kempton Dunn, Co., Pres. Research Ctr. Est. date of Oper. Summer 1959. \$2 million.

Dalton — The Don Shaffer Farm. James Fritz, Pres. New Milking Cntr. Plans announced. \$325,000.

Lexington—Midwest Houses, Inc.; In Oper. HO: Mansfield, Ohio.

Lorain—American Gypsum Co.; Melvin H. Baker, Chm. of Bd. Wallboard, lath, sheathing & plaster. Est. date of Oper. 1960. \$Multi-million. (D)

Toledo—Champion Spark Plug; Research Lab. In Oper. \$1 million.

OKLAHOMA

Alva—Kinzie Industries; In Oper.

Oologah—Public Service Co.; Power station. Under Const. \$40 million.

Tulsa — White Nipple & Machine Co.; Lewis D. Mickley, Off. 18 N. Guthrie Ave. HO: Houston, Tex. Pipe & conduit nipples & forged steel fittings. Est. date of oper. Feb. 1959. 16,000 Sq. Ft. whs. purchsd. (B)

OREGON

Dalles City—Mayflower Milk Co.; Under const.

Milwaukie — Wilhelm Properties, Inc.; Kellogg Park Ind. Dist. Whse. Est. date of Oper. July 1959. 7½ acres.

Myrtle Creek—Myrtle Creek Plywood, Inc.; Est. date of Oper. Jan. 1959. Plywood lay-up. (B)

PENNSYLVANIA

Berwick—D. & M. Mfg. Co.; Samuel Mittleman, Plnt. Off. 349 Bowman St. Children's dresses. Est. date of Oper. Jan. 1959. (B)

Braddock Hills Borough — Jas. H. Matthews Co.; Brinton Rd. & Penn-Lincoln Parkwy. E. HO: Pgh., Pa. Dies for industry. Plans announced. 22 acres. \$1.5 million. (D)

Connellsville—Taylorcraft, Inc.; Brig. Gen. Lance Call, (Ret.), Pres. & Bd. Chm. Connellsville Airport. Light Airplanes. Est. date of Oper. 1959. (C)

Save time every time...

Southern Airways

FLY
Southern Airways

Connecting 31 Cities with the World

HUBBROS — Precision Timepiece of Southern Airways

President Scharffenberger of Kellogg Switchboard and Supply Company tells

"WHY WE CAME TO NORTH CAROLINA"

"We came because the right kind of people are already here.

As the communications division of International Telephone and Telegraph Corporation, Kellogg is developing new electronics products — many still on the drawing boards — which must be supported by a great deal of technical background.

"This technical background exists uniquely in this area," said President Scharffenberger.

The advantages of North Carolina's leadership in industrial research, symbolized by the unique Research Triangle, which was the clincher in Kellogg's plant location decision, are available to other expanding industries. Executives are invited to contact in confidence William P. Saunders, Director, Dept. of Conservation and Development, Raleigh, North Carolina.



Kellogg President George T. Scharffenberger, (R) explains new Raleigh plant to North Carolina's Businessman Governor, Luther H. Hodges.

NORTH CAROLINA



CENTER OF THE SOUTHWEST

TAKE a look at modern West Texas, with an eye to your industrial future.

We can help you survey our entire area, with a confidential report tailored to your individual requirements.

Write today for human and physical resources data.
Public Service Department,
West Texas Utilities Co.,
Abilene, Texas

West Texas Utilities
Company



PLASTICS

FOR INDUSTRIAL AND

CONSTRUCTION NEEDS

The most complete line of plastics in the Southeast
— Including —
Plexiglas — Cellulose Acetate —
Nylon — Teflon — Formica —
Polyethylene

plus
Complete supplies for the Fiberglass Reinforced Polyester Industry.

SOUTHEASTERN PLASTICS SALES CO.

Div. of SEPSCO, Inc.

610 Morosgo Dr., N.E. • Atlanta, Ga.
Cedar 3-3274 • TWX AT-409

NEW PLANTS

Irwin—Mason, Shaver & Rhoades, Inc.; Mr. Charles R. Rhoades, Pres. Stewartville Rd. Stainless steel machine parts for nuclear reactors, etc. In Oper. 32,000 Sq. Ft. (B)

Monroeville—Koppers Co., Inc.; Dr. Paul W. Bachman, V. Pres. Research ctr. Est. date of Const. 1959. 176 acres. \$10 million.

Murrysville — Beckwith Machinery Co.; Geo. N. Beckwith, Pres. Rte. 22. Caterpillar Tractors. Est. date of Const. April 1959. \$1 million.

Pittsburgh—Hagan Chemicals & Controls Inc.; Mr. Wm. W. Hopwood, Pres. Res. in deterg., water treatment processes, corrosion, food process, leather tanning, etc. In Oper. Hqqs. & Lab.

PUERTO RICO

No plants reported.

RHODE ISLAND

No plants reported.

SOUTH CAROLINA

Charleston—Polaris Missile Assembly Facility; Naval Ammunition Depot. Est. date of Oper. May 1960. \$Multi-million.

Georgetown—Cort Dresses; Hwy. 17. (HO: N. Y. C. Est. date of Oper. March 1959. (B)

Greenville—Stone Mfg. Co.; Eugene F. Stone, III, Pres. Apparel. Plans announced. (D)

Spartanburg—Deering Milliken Res. Corp. Ctr.; Interstate Hwy. 85. In Oper. Textile res. \$2 million. 80,000 Sq. Ft.

Spartanburg—Faultless Rubber Co.; Polyurethane Products. In Oper. \$1 million. (C)

Spartanburg — Union Bag-Camp Paper Corp.; HO: N. Y. C., N. Y. 25½ acres. Plans announced.

SOUTH DAKOTA

Huron — Bison Foundry; Joe Underway, Pres. Foundry in Oper. \$150,000. (B)

Plankinton—Fullerton Lumber Co.; Richard Huff, Mgr. Concrete ready-mix plnt. Plans announced.

Redfield—Dakota Mill; Charles Borchard, Mgr. Feeds. In Oper. \$150,000. (B)

TENNESSEE

Counce—Tennessee River Pulp & Paper Co.; G. W. E. Nicholson, Pres. Kraft paper mill. Pulp & Container Board. Plans announced. \$40 million. (E)

Cumberland City—Oolite Minerals Corp.; John W. Gonce, Pres. High calcium limestone. Est. date of Const. Jan. 1959. \$250,000. 3½ acres.

Grant Junction — International Molded Plastics, Inc.; Structoglas Div. Richard L. Dreher, Plt. Mgr. HO: Cleveland, Ohio. Fiberglass bldg. materials. In Oper. (B)

Henderson—Shultz Mfg. Co. Hwy. 100. Est. date of Oper. Jan. 1959. (C)

Lewisburg—General Shoe Co.; Ben Willingham, Pres. In Oper. \$450,000. 60,684 Sq. Ft.

McMinnville — Custer-Frazier Corp.; Assembly Plnt. (Aircraft). Under Consid. Canadian Firm. (E)

Memphis — Mid-South Concrete Pipe; President's Island. Plans announced. 14 lots. Nashville — General Shoe Co.; Ben H. Willingham, Pres. Murfreesboro Rd. Plans announced for 3 plts.

Nashville — Seven-Up & Pepsi-Cola Bottling Co.; Alvin G. Beaman, Off. of Seven-Up, Milton Strate, Pepsi-Cola Gen. Mgr. Companies combined. Under const. \$400,000. (B)

TEXAS

Beaumont—Borden Co.; John W. Luker, Gen. Mgr. of Borden at Houston. Hwy. 90 Freeway. Processing Plant. Under Const. \$525,000. (C)

Dallas — Evans-Black Carpet Co.; Eddie Evans & Art Black, Owners. 9020 Directors Row. Brook Hollow Ind. Dist. Office, Shwrm. & whse. bldg. In Oper. 25,000 Sq. Ft.

Dallas—Peter Hand Foundation; Jinkins Moore, Plt. Mgr. 130 Howell. Mfg. & Distr. fac.—splr. of vitamin & Antibiotic premixes to feed industry. In Oper.

Dallas—Northcutt Corp. Charles W. Northcutt, Pres. 8906 Chancellor Row. Brook Hollow Ind. Dist. Whsl. Distr. of drug sundries & variety store merch. In Operation. 10,000 Sq. Ft.

Midland—Tube-Kote Inc.; Tower Rd. Pipe coating Plnt. Plans announced. \$250,000. (B)

Point Comfort—Aluminum Co. of America; A. B. Kaltwasser, Wks. Mgr. Alumina refining. Est. date of Operation Feb. 1959. \$45 million. HO: Pgh., Pa. (D)

UTAH

Brigham City—American Sportswear Co.; Wm. Kirchbaum, Owner. Main St. Jackets. Est. date of Oper. March 1959. (C)

Salt Lake City—Plinkote Co.; I. J. Harvey, Jr. Chm. of Bldg. Chief Ex. Off. "Miracle Lime" used to bldg. Const. Plans announced. \$1 million.

VERMONT

No plants reported.

VIRGINIA

Norfolk — Tabet Mfg. Co.; Sam Tabet, Pres. Norfolk Ind. Park. Elect. switches, etc. Est. date of Comp. 1960. 13 acres. \$400,000.

Petersburg — Jeansco, Inc.; Pine & W. Brown. Sta. Perry Branch, Plnt. Mgr. Dungarees. In Operation. 22,000 Sq. Ft. (C)

S. Norfolk — Cargill, Inc.; HO: Mpls., Minn. Soy bean process. Est. date of Const. 1959.

WASHINGTON

Anacortes—Texaco; Refinery. In Oper. (D)
Wallula — Cascade Kraft Corp.; Pulp & paper mill. Est. date of Oper. Feb. 1959.

WEST VIRGINIA

No plants reported.

WISCONSIN

Madison—Hoffman House Sauce Co.; Hwy. 151 & East Beltline. Plans announced.

WYOMING

Gas Hills—Federal Uranium Corp.; Ralph W. Neyman, Pres. Uranium Process. Plans announced.

Glenrock — Pacific Power & Light Co.; 100,000 kw Steam-elec. Plnt. in Oper.

CANADA

ALBERTA

Duverney — Western Chemicals, Ltd.; Caustic soda & chlorine. Plans announced. \$1½ million.

Ft. Saskatchewan — Dow Chemical Co., Ltd.; L. D. Smithers, Pres. Caustic soda, chlorine, phenol, hydrochloric-acid, glycol & plastic foam. Plans announced. \$Multi-million.

BRITISH COLUMBIA

Port Moody — Reichold Chemicals, Ltd.; Phenol & formaldehyde. Plans announced.
Vancouver—Sherwin-Williams; In Oper.

NEW PLANTS

MANITOBA

NEW BRUNSWICK

NEWFOUNDLAND

NOVA SCOTIA

No plants reported.

ONTARIO

Chatham — Continental Can Co.; Cans. Under Const.

East York—Toronto Engine Works, Ltd.; 16 Curity Ave. General machine work. Est. date of Oper. March 1959. 16,500 Sq. Ft.

Scarborough Twp.—Griffith Laboratories, Ltd.; Pharmacy Ave. Spice extraction Plnt. HO: Chicago, Ill. Plans announced.

Toronto—Sovereign Chemical Corp., Ltd.; Dr. N. J. Talalay, Pres. 64 Sheffield St. Accelerators for rubber indust., stabilzrs. for plastics indstry., etc. In Oper.

PRINCE EDWARD ISLE

No plants reported.

QUEBEC

St. Therese—Reichhold Chemicals Ltd.; L. O. Blackburn, Mgr. Phthalic anhydride. Plans announced. \$1,000,000. (B)

SASKATCHEWAN

No plants reported.

OTHER COUNTRIES

Argentina—Buenos Aires. Capasca; Steel Mill. Plans announced. \$270 million.

Argentina—Cordoba. Steel Improvement & Forge Co.; Chas. H. Smith, Jr. Pres. Forge plnt. HO: Cleveland, Ohio. Under Const.

Brazil—Jundiai. Sifco do Brazil; Chas. H. Smith, Jr., Dir. (Steel Improv. & Forge Co. of Cleveland, Ohio) Forge Plnt. Est. date of Oper. Aug. 1959. (D)

Brazil — Siderugica Paulista (Cosipa) Steel mill complex. (In San Paulo). Plans announced. \$170 million.

Brazil—San Jose Dos Campos. Eaton S. A.; Engine valves for autos & trucks. In Oper.

India—Bareilly, Uttar Pradesh. (Unnamed firm); Synthetic rubber. Est. date of Oper. 1961. \$30 million.

India—Coimbatore. South India Viscose, Ltd.; Rayon comples. Est. date of Oper. 1960. \$20 million.

India—Republic Forge, Ltd.; (in Hyderabad). Plans announced.

Italy—Punta Fiuma. General Electric Co.; Power Plnt. Plans announced.

Mexico—Mexico City. Lockheed-Azcarate, S. A.; Juan F. Azcarate, Off. Airplanes. Plans announced.

Netherlands—Dordrecht. E. I. Du Pont de Nemours & Co., Inc.; man-made fibers. Plans announced.

Portugal—Lisbon. Resinas Sinticas, Lda. (Resintela) Synthetic resins. In Oper. 14 acres. Pilot plnt. Lab. Offices, workmen's quarters & a hospital.

Sicily—Ragusa. (Unnamed firm). Petrochemicals. Est. date of Oper. 1959. \$18 million.

Venezuela—Maracay. S. C. Johnson & Son, de Venezuela, S. A.; Paste & liquid wax, insecticides. HO: Racine, Wisc. In Oper.

check your plant site requirements

... against what the Union Pacific has to offer you in the 11 Western states it serves. In all probability you'll find exactly the plant site you seek. Simply get in touch with your nearest U. P. representative or contact us direct.

☐ Raw
Materials

☐ Power

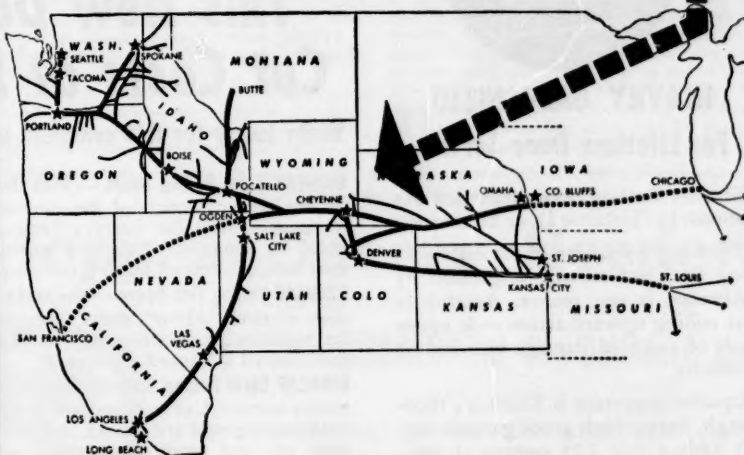
☐ Labor
Skilled and
Unskilled

☐ Market
Availability

☐ Transportation

☐ Living
Conditions

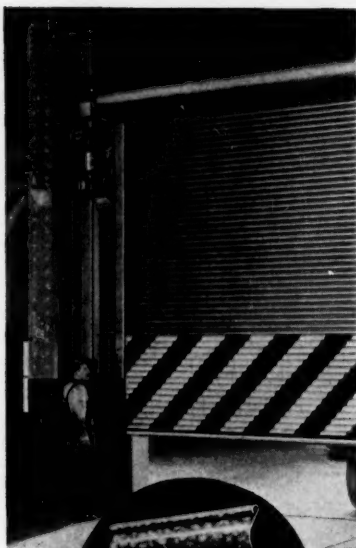
☐ Educational
Facilities



Industrial Development Dept.
UNION PACIFIC
Railroad

OMAHA 2, NEBRASKA

Kinnear Steel Rolling Doors



HEAVILY GALVANIZED For Lifetime Door Service

Kinnear Rolling Doors represent the utmost in "Lifetime Door Efficiency".

The rugged strength of the interlocking steel slat curtain, *originated by Kinnear*, is one reason. Another is its coiling upward action — it opens out of reach of damage by wind or vehicles.

Equally important is Kinnear's thorough, heavy, high grade galvanizing. It adds a full 1.25 ounces of *pure zinc* to every square foot of metal, (ASTM standards). This galvanizing is followed by Kinnear's own *test-proved, time-proved* Paint Bond treatment, which assures quick, thorough, *lasting* coverage and adhesion of paint applied after the doors are erected.



This New Door Guide Can Cut Costs at Every Opening!

Write today for this complete up-to-the-minute information on:

KINNEAR Steel Rolling Doors — with the coiling upward action of the famous interlocking-steel-slat curtain (originated by Kinnear). They save space, save time, provide all-metal protection.

KINNEAR Rolling Fire Doors — the exclusive, all-steel "Akbar" doors, famous for positive starting action, safe closing speed, other advanced features.

KINNEAR Steel Rolling Grilles — the protective openwork of steel bars and links with coiling upward action. Admits light, air, and vision when closed — but blocks all intruders.

KINNEAR Motor Operators — Special, rugged, heavy-duty motors that add time-saving push-button control to the many other advantages of upward-acting doors.

KINNEAR Bifold Doors — Heavy-duty service doors of wood or all-steel. Center-hinged to fold upward with easy jack-knife action.

KINNEAR Rol-Top Doors — Sectional doors (wood or all-steel) available paneled for glass in any number of sections.

Write TODAY

The KINNEAR Mfg. Co.

FACTORIES:

1600-20 Fields Avenue, Columbus 16, Ohio
1742 Yosemite Ave., San Francisco 24, Calif.

Offices and Agents in All Principal Cities

KINNEAR
ROLLING DOORS
Saving Ways in Doorways

DIRECTED BY

Richard Edmonds ... 1882-1930
 Frank Gould 1930-1943
 William Beury ... 1943-1955
 McKimley Conway ... 1956

MANUFACTURERS RECORD

(IN REVIEW)



MARCH 1885

(AS ABSTRACTED MORE THAN 70 YEARS LATER)

BALTIMORE, MD.

An Important Contract for American Manufacturers

The Henry R. Worthington Hydraulic Pump Works, of New York, among the largest manufacturers of pumps in the world, have secured the contract from the British War Department for the construction of the pumps for the supply of water to the British forces now operating in the land of the Mahdi. This is the largest order ever given at one time by any foreign government for this class of goods and for such an important service. So pressing are the orders, that these works will be driven to their full capacity, and shipments made as fast as possible to England, and thence to Suakim, where they will be sent into the interior and set up at intervals of about 30 miles. An inquiry has been made in this country for 360 miles of 4-inch piping for the service, but it is likely that time being so precious, the order will be filled in Great Britain. Messrs. Jackson & Tyler, South Howard street, Baltimore, are the agents for the Worthington Pump.

Catalogue Sheets Issued

Mr. Geo. V. Cresson, proprietor of the Philadelphia Shafting Works, 18th and Hamilton streets, Philadelphia, has issued two very handsome sheets 19 x 24 inches, illustrated with fine cuts of some of the different styles of pulleys, gearing, shafting, couplings, hangers, etc., turned out at these extensive works. These sheets will prove of much interest and value to those who need or expect to need anything in this line. They will be sent upon application.

Cotton Mill Available

The advertisement of A. C. M. in our "Business Chances" column offers a fine opportunity to any one who wants to engage in cotton manufacturing South. The mill is in a good locality and favorably situated in every way.

Knoxville Acquires First-Rate Hotel

Persons going to Knoxville, Tenn., should stop at the Hattie House. This is a first-class

hotel, and is the only one in the business center of the city. It is nearly new, and contains about 100 rooms, some of them large rooms especially intended for commercial travelers. A portion of the lower floor, which is 200 by 50 feet, has recently been fitted up as the office, and the remainder divided up into bar, barber shop, billiard room and ten-pin alley, furnishing a place of resort that Knoxville has long felt the need of. The hotel is kept by Mr. John C. Flanders, who is an ideal hotel man.

Lord's Boiler Compound

One of the troubles to which steam users are constantly subjected, is the accumulation of scale in boilers, and efforts are constantly being made either to prevent the formation of scale or else to remove it after it has been formed. While the scale will ruin the boiler its removal may also do the same thing. Compounds of various kinds are used to remove the scale, but unfortunately they sometimes remove not only the boiler itself, but also the workmen around it. This is done by the use of some compounds, which, while destroying the scale, weaken the boiler and cause its destruction either by explosion or wearing out. A boiler compound which has been thoroughly tested for years is Lord's manufacture, 316 Union street, Philadelphia, Pa. According to the tests of the ablest chemists this compound will not injure the boiler, but it will remove the scale. It is widely used and has been for a number of years, and with the most satisfactory results. Steam users can obtain full particulars regarding it from Geo. W. Lord, 316 Union street, Philadelphia, Pa.

Slide Valve Engines

Persons desiring first-class slide valve engines, made by responsible and reliable workmanship, can have their desires fulfilled by addressing Messrs. Chandler & Taylor, Indianapolis, Ind.

This firm is an old and well-known one; their word is as good as their bond, and therefore their statements as to merits and quality of their engines and saw mills can be im-

plicitly relied upon and accepted.

Their manufactory is known as the Phoenix Machine Works, Indianapolis.

They also make side-cutting Mulay saw-mills, which are adapted to general purposes and for neighborhood work.

Write them for catalogues and prices.

New Company Organized

A new silver and nickel-plating establishment has been organized at Richmond, Indiana; is in operation and turning out most excellent work. Warren Shumard, of Shumard Sash Balance fame, is president of the new company.

Architects and Builders Note

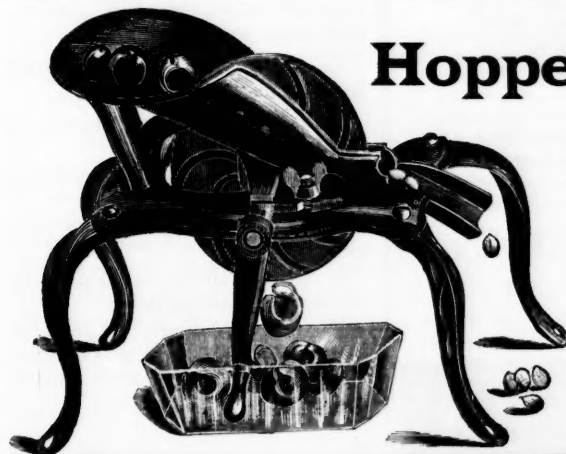
Architects and builders should, in making their estimates, bear in mind the iron roofing and siding of the Cincinnati Corrugating Company, which is so fully represented and described in their new catalogue just out of press. Rink managers and builders will find it especially interesting. It will be sent free. Address Cincinnati Corrugating Co., Cincinnati, Ohio.

ELEVATOR FACTORY

Messrs Clem & Morse of Nos. 411 and 413 Cherry Street, Philadelphia, have purchased the property at Frankford Road and Wildy Street formerly occupied by Martin Landenburger as a sawl factory, and will use it as an elevator manufactory. The lot has a frontage of 50 feet on Frankford road and extends back about 360 feet to Shackamaxon street, with a frontage there of 60 feet. In addition to the four story building, 50 x 251, including engine, boiler house and stables, which is being fitted with the necessary shafting and machinery, the firm will erect a one-story factory, 98 x 60, fronting on Shackamaxon street. The works will be moved from the present stand on Cherry street as soon as the new building can be got ready, but they will keep their down-town office at the old stand on Cherry Street. The price paid for the lot and factory was \$40,000.

— IMPROVED — 1884 —

Hoppes Cherry Seeder.



SCOTT MANUFACTURING CO., Baltimore, Md.

ALSO MANUFACTURERS OF

SCOTT'S ROTARY KNIFE PEACH PARERS.

"Improved VICTOR" Apple Parers, Corers and Slicers.

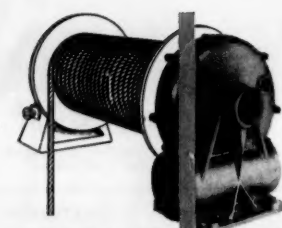
"ORIOLE" Apple Parers, Corers and Slicers.

"GOLD MEDAL" Apple Parers

WALKER'S Pine Apple Slicers.

PHILLIPS' Fruit and Vegetable Evaporators.

BIXBY'S Best Water Filter and Deodorizer.



LOW COST SOLUTION TO HIGH PRODUCTION COSTS



Die cast aluminum gear housing used on front end mounted Jeep winch.



Lawn edger blade guard



Air drill handle



Sill cock

PRECISION DIE CASTING has helped manufacturers hold the price line in spite of steadily rising labor and commodity costs. This superior and economical method of fabricating component parts for trucks, automobiles, household appliances and many other products of wide application virtually eliminates the necessity for costly machining and finishing.

The most flexible shapes are cast accurately to close tolerances . . . ready for use. High tensile strength zinc and aluminum alloys mean **durability**. The die casting method means savings in time and money.

Call or write: Production Die Casting Company, the South's leading die caster.

Discover how die casting can help you cut costs.



PRODUCTION DIE CASTING COMPANY

6502 RUSK AVE.

WA 3-4627

HOUSTON 11, TEXAS

PLANNING

Site Survey Process Stressed at Buffalo

BUFFALO. An excellent report on what a big national firm looks for in locating a plant site was given here recently by William M. North, vice president of National Gypsum Company.

In a talk before the First Annual Western New York Industrial Development Conference, Mr. North told the group: "Our plant locations are first approached by studying how many customers we will have, where they will be, when they will be there, and how much it may cost to get our products to them. Then and only then are we ready to pinpoint plant locations."

"Whether a company locates its plants at the center of the market or at its raw material source depends upon several factors: Comparison of rates on raw materials with rates of the finished products, extent of weight loss in the process of manufacturing, amount of scrap and waste or by-product, and the amount of fuel. We have examples of each problem in our company," he said.

The next process is the zeroing-in on the actual plant location. "In our basic office studies on location," Mr. North continued, "we determine our region say within two hundred miles. Then detailed studies are made with maps, costs of incoming vs. outgoing materials within the area, freight absorption, against competition, tentative fuel and power costs."

After further detailed study and analysis, he said, company representatives go into the field to make the final choice of the actual site.

Emphasizing the thoroughness with which National Gypsum investigates plant site possibilities, Mr. North said that he had made office studies of more than 500 communities and personally had visited more than 100.

Questions asked at the community level include these:

Is there a plan to rid the city of slums and blight?

Is the city capitalizing on its natural advantages such as a port?

Is the city tackling its traffic problems?

Is the area attempting to solve the problems of metropolitan growth?

What is the "climate" of the community? Are there wide-awake citizens who are planning boldly and preparing for tomorrow?

SITE SELECTION HANDBOOK ANALYSIS

The addition in 1958 of more than 800 new development groups, as reported in the last Site Selection Handbook, brings the current total to over 8,000. This indicates the increased competition for new plants among communities all over the country . . .

Over 800 new industrial development groups offering assistance to site-seeking industrialists in the United States and Canada, and Alaska, Hawaii and Puerto Rico were reported to INDUSTRIAL DEVELOPMENT during 1958. Statistics compiled from the recently published SITE SELECTION HANDBOOK edition of I. D. reveal that slightly over 8,000 such agencies are now operating within the Continental United States, some 60 in Alaska, Hawaii, and Puerto Rico, and approximately 350 in Canada.

New York Tops List

New York, retaining its position of first place in the total number of development agencies of all types, paces the nation with a report of 460 plant location groups. Pennsylvania, maintaining its position of second-ranking state, shows a total of 446 such organizations in this year's survey. The 74 new groups reported in California, ease that state into the third-place spot held last year by Texas, which now figures fourth with a total of 413.

Still to be found among the "top ten" in the nation in total number of industrial development organizations are Florida, North Carolina, Massachusetts, Illinois and Wisconsin. A newcomer to these top-ranking states is Georgia, which stands first in the country in new units reported this year.

Other states which have shown outstanding growth in industrial development activities are Maine, Arkansas, Connecticut, Kansas and New Jersey.

Canada shows an increase of 69 plant location groups over last year's total of 282.

Viewing the growth in the United States by census region, the HANDBOOK analysis revealed that the greatest growth has been in the nine-state South Atlantic region, which comprises Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia and West Virginia; the West South Central section of Arkansas, Louisiana, Oklahoma, and Texas; and the New England area of

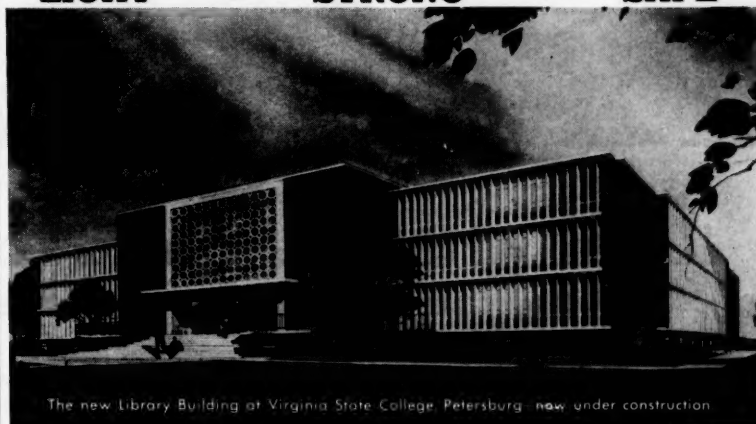
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

Almost one-half of all new groups reported throughout the nation during

the past year were industrial development foundations. At present, there are about 1,575 such organizations in the United States.

Leading the way in this type of ac-

SOLUTION: **SOLITE**
LIGHT • STRONG • SAFE



Architects: Walford and Wright, A.I.A., Richmond, Va.
Contractor: Southern Engineering and Construction Corp., Richmond, Va.
Structural Consultant: Torrence Dreelin and Associates, Richmond, Va.

Space for roughly 300,000 volumes . . . an approved layout for library science courses . . . metal sunscreens that adjust to the turning of the sun . . . these are just a few of the modern concepts found in the new Library Building at Virginia State College, Petersburg.

In step with this modern building approach is the use of Solite lightweight structural concrete and masonry units. Solite concrete's light weight (1/3 lighter than natural aggregate concretes), means less deadweight and more usable space . . . adapts perfectly to the lift-slab technique being used to expedite construction. And Solite lightweight masonry units . . . fire resistant, sound absorbent, self-insulative . . . contribute their "building bonuses" throughout the project.

Solite has a talent for complementing contemporary design . . . expediting modern techniques. Whatever your building goals, chances are that Solite can help you accomplish them.

SO LIGHT . . .

SO SAFE . . .

SOLITE

PLANTS: Aquadale, N. C. • Brems Bluff, Va. • Leaksville Junction, Va. • Green Cove Springs, Fla.
OFFICES: Box 9138, Richmond, Va. • Box 1843, Charlotte, N. C. • Box 147, Columbia, S. C.
Box 6336, Raleigh, N. C. • Box 5735, Bethesda, Md. • Box 904, Jacksonville, Fla.

FOR BETTER BUILDING — Consult your architect or engineer.
Whatever your construction needs, professional advice can save you time and money.



Flintkote's new Insulrock plant, just about midway between Chicago and South Bend, strategically located with the help of the New York Central.

"Just what we needed" says Flintkote about the Central's plant-site suggestion!

How to locate a new plant? Sometimes hundreds of possibilities suggest themselves. That's when New York Central's plant-site consultants can help separate the wheat from the chaff . . . come up with solid, worth-while appraisals!

Take the case of The Flintkote Company, manufacturers of the broadest line of building products in America. A site was needed for their new Insulrock plant. After calling in the Central and looking into its recommendations, Flintkote management agreed that a 35-acre site in North Judson, Ind., met their requirements to the letter!

Less than 60 miles from Chicago, less than 40 from South Bend, North Judson is right in the

center of an area of great building activity, and is close to many of Flintkote's best customers. In addition, North Judson is next to New York Central's main line.

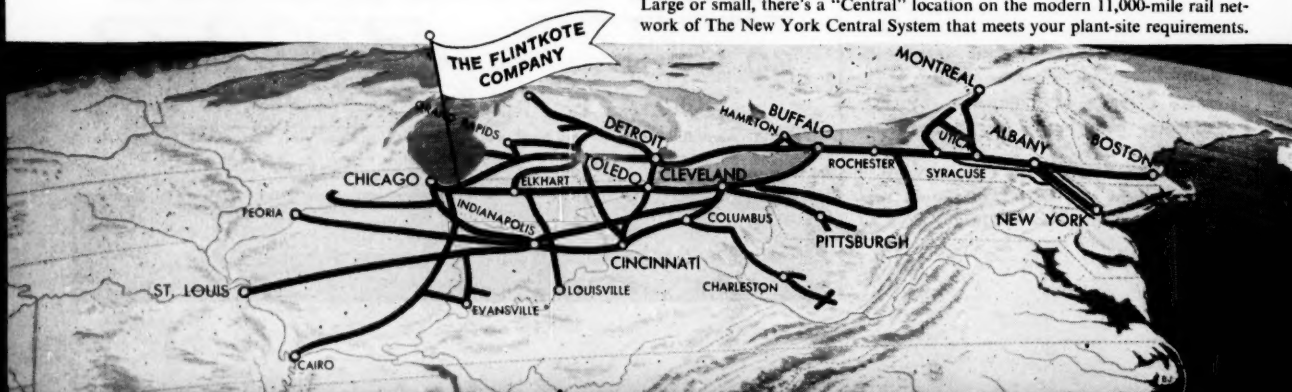
What the Central did for Flintkote, it can do for you, whatever your special needs! If you wish, the Central will not only draw up plant-site reports, but will also assemble the necessary acreage . . . work with local officials to solve special problems—all this on a confidential basis and at no charge to you.

Write to: Otto W. Pongrace, Director of Industrial Development, Dept. D, New York Central Railroad, 466 Lexington Ave., New York 17, N. Y.

Plant-Site Opportunities
New York Central has 15 illustrated brochures filled with details on the following industrial areas. Feel free to write for the ones you want.

1. Albany-Troy-Schenectady
2. Ashtabula
3. Buffalo-Niagara
4. Cal-Sag (Chicago Area)
5. Chicago
6. Cleveland
7. Detroit
8. Elkhart
9. Gardenville, N.Y.
10. Rochester
11. St. Lawrence Seaway
12. Syracuse
13. Utica
14. Youngstown
15. Industrial Parks in Ill., Ohio, N.Y., Mass., and Mich.

Large or small, there's a "Central" location on the modern 11,000-mile rail network of The New York Central System that meets your plant-site requirements.



SITE HANDBOOK ANALYSIS

tivity is North Carolina, which this year shows a total of 176 non-profit corporations offering financial assistance to industry in the acquisition of sites and buildings, and in meeting other costs involved in plant location. In this state, this type organization accounts for more than one-half of all industrial development groups.

Other states ranking high in the number of local organizations offering funds as a plant location inducement are Wisconsin, Arkansas, Missouri, Georgia, and Minnesota. New foundations formed in Pennsylvania and Kansas place these two states well at the top of the growth list of such corporations.

The 1,030 planned industrial districts in the United States and Puerto Rico, plus Canada's 23, shows an increase of almost 200 over last year's figures. Reporting over 100 such planned industrial areas, Texas maintains its nation-wide lead. California, showing substantial growth in the number of such projects, follows with 84, an increase of 19 over last year's totals. 50 districts are reported to be in operation in Massachusetts and 45 in North Carolina. Following the growth lead set by California comes Kansas with 15 new districts and Georgia with 14.

This year's HANDBOOK lists approximately 170 utility companies and over 100 railroad companies in the United States, Canada, Hawaii and Puerto Rico who are providing industry with plant location services.

Over 30 additional private consulting groups were included in this year's listings, bringing the total of such agencies to about 180.

Nearly 60 banking institutions throughout the United States and Canada were reported to be rendering assistance, through special industrial development departments, to industry in their plant location problems.

To industrialists concerned with water transportation in site selection, more than 100 port authorities in the United States, Canada, Hawaii and Puerto Rico now provide information on matters such as shipping schedules and availability of waterfront sites.

Additional Listings

A number of additional listings and corrections were received after the last Site Selection Handbook was printed. On the following pages appear some of

these corrections and additions.

Conway Publications' Research Department continuously receives information relating new developers and organization changes. Periodically, revisions are published in regular monthly issues of *Industrial Development and Manufacturers Record*.

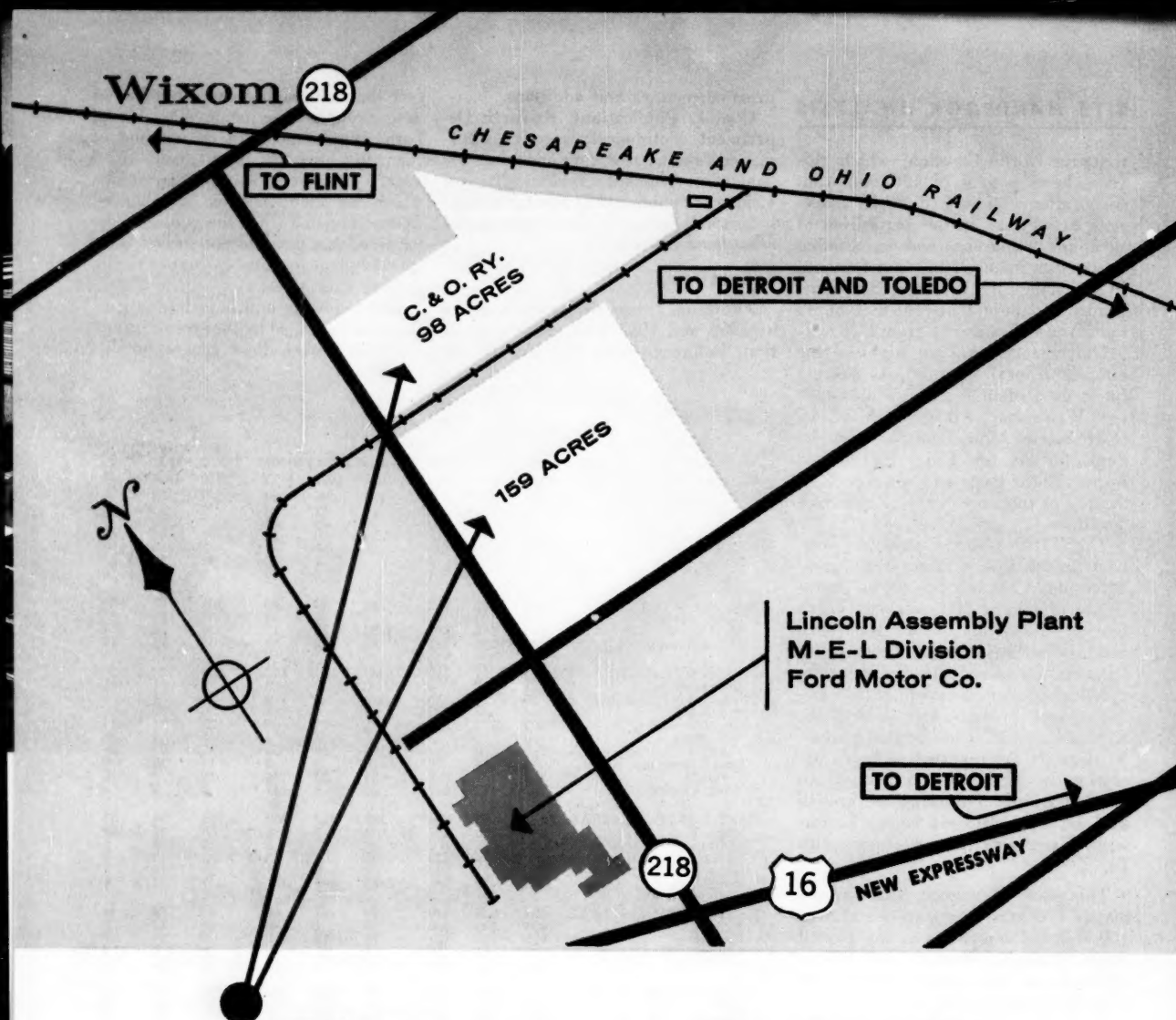
Tabulation

The table below compares findings of 1956 and 1957 with the latest edition. Reference must be made to the

fact that, although a large number of new groups have come into being, basic improvements in the method of reporting have also been made. However, a number of small organizations which list themselves as "developers" were eliminated when the publisher determined that they did not, in fact, offer specific plant location assistance to site seeking executives.

The following additions and corrections are arranged by the type of group, and then broken down geographically.

| REGION AND STATE | ALL GROUPS | | | FOUNDATIONS | | | INDUSTRIAL DISTRICTS | | |
|--------------------------------------|------------|-------|-------|-------------|-------|------|----------------------|------|------|
| | 1958 | 1957 | 1956 | 1958 | 1957 | 1956 | 1958 | 1957 | 1956 |
| NEW ENGLAND | 786 | 674 | 636 | 114 | 98 | 99 | 102 | 81 | 67 |
| Connecticut | 171 | 126 | 120 | 14 | 11 | 13 | 10 | 8 | 8 |
| Maine | 142 | 86 | 80 | 39 | 28 | 28 | 14 | 9 | 7 |
| Massachusetts | 311 | 285 | 268 | 22 | 20 | 20 | 50 | 43 | 40 |
| New Hampshire | 49 | 68 | 63 | 31 | 33 | 30 | 9 | 9 | 0 |
| Rhode Island | 62 | 58 | 48 | 1 | 1 | 2 | 11 | 9 | 12 |
| Vermont | 51 | 51 | 57 | 7 | 5 | 6 | 8 | 3 | 0 |
| MIDDLE ATLANTIC | 1,132 | 1,065 | 972 | 114 | 90 | 66 | 101 | 84 | 56 |
| New Jersey | 726 | 197 | 173 | 0 | 0 | 0 | 35 | 27 | 26 |
| New York | 460 | 454 | 382 | 38 | 38 | 11 | 35 | 32 | 14 |
| Pennsylvania | 446 | 414 | 417 | 76 | 52 | 55 | 31 | 25 | 16 |
| SOUTH ATLANTIC | 1,455 | 1,237 | 1,239 | 380 | 191 | 167 | 154 | 123 | 59 |
| Delaware | 21 | 22 | 16 | 0 | 0 | 0 | 1 | 1 | 1 |
| District of Columbia | 25 | 27 | 25 | 0 | 0 | 0 | 1 | 1 | 1 |
| Florida | 345 | 343 | 287 | 7 | 6 | 1 | 36 | 30 | 6 |
| Georgia | 302 | 172 | 176 | 121 | 59 | 45 | 35 | 21 | 14 |
| Maryland | 86 | 69 | 59 | 5 | 3 | 3 | 5 | 3 | 3 |
| North Carolina | 315 | 248 | 287 | 176 | 59 | 55 | 45 | 41 | 19 |
| South Carolina | 74 | 76 | 70 | 0 | 0 | 2 | 17 | 15 | 9 |
| Virginia | 156 | 158 | 202 | 51 | 50 | 44 | 12 | 9 | 5 |
| West Virginia | 131 | 122 | 107 | 20 | 14 | 17 | 2 | 2 | 1 |
| EAST NORTH CENTRAL | 1,101 | 1,058 | 996 | 236 | 212 | 160 | 112 | 94 | 57 |
| Illinois | 268 | 255 | 280 | 4 | 2 | 1 | 39 | 35 | 32 |
| Indiana | 98 | 95 | 100 | 0 | 1 | 1 | 15 | 14 | 6 |
| Michigan | 233 | 225 | 225 | 58 | 51 | 53 | 22 | 15 | 5 |
| Ohio | 235 | 231 | 190 | 9 | 9 | 5 | 19 | 16 | 8 |
| Wisconsin | 267 | 252 | 201 | 165 | 149 | 100 | 17 | 14 | 6 |
| EAST SOUTH CENTRAL | 554 | 538 | 470 | 79 | 77 | 65 | 82 | 59 | 34 |
| Alabama | 109 | 105 | 100 | 5 | 4 | 4 | 14 | 11 | 6 |
| Kentucky | 155 | 151 | 120 | 15 | 13 | 7 | 33 | 27 | 10 |
| Mississippi | 69 | 61 | 50 | 3 | 1 | 3 | 10 | 6 | 4 |
| Tennessee | 221 | 221 | 200 | 56 | 59 | 52 | 25 | 15 | 14 |
| WEST NORTH CENTRAL | 950 | 888 | 730 | 375 | 338 | 227 | 134 | 101 | 57 |
| Iowa | 222 | 214 | 54 | 37 | 31 | 6 | 31 | 22 | 10 |
| Kansas | 141 | 99 | 85 | 62 | 42 | 31 | 35 | 20 | 9 |
| Minnesota | 190 | 192 | 150 | 106 | 121 | 60 | 18 | 16 | 9 |
| Missouri | 257 | 239 | 210 | 123 | 95 | 89 | 29 | 26 | 17 |
| Nebraska | 83 | 83 | 75 | 34 | 32 | 33 | 13 | 10 | 9 |
| North Dakota | 20 | 21 | 21 | 2 | 2 | 1 | 3 | 3 | 2 |
| South Dakota | 37 | 40 | 35 | 11 | 12 | 7 | 5 | 4 | 1 |
| WEST SOUTH CENTRAL | 942 | 843 | 737 | 232 | 184 | 166 | 178 | 170 | 119 |
| Arkansas | 187 | 137 | 127 | 123 | 77 | 78 | 18 | 18 | 7 |
| Louisiana | 196 | 192 | 150 | 15 | 18 | 13 | 21 | 21 | 10 |
| Oklahoma | 146 | 127 | 110 | 29 | 24 | 20 | 38 | 36 | 31 |
| Texas | 413 | 387 | 350 | 65 | 65 | 55 | 101 | 95 | 71 |
| MOUNTAIN STATES | 428 | 370 | 261 | 31 | 22 | 15 | 47 | 38 | 20 |
| Arizona | 80 | 86 | 38 | 9 | 7 | 5 | 13 | 11 | 6 |
| Colorado | 73 | 64 | 58 | 9 | 3 | 5 | 11 | 10 | 6 |
| Idaho | 50 | 47 | 36 | 4 | 3 | 3 | 3 | 1 | 0 |
| Montana | 71 | 43 | 22 | 5 | 5 | 0 | 4 | 3 | 2 |
| Nevada | 27 | 18 | 17 | 1 | 2 | 0 | 4 | 2 | 2 |
| New Mexico | 51 | 44 | 26 | 2 | 0 | 0 | 6 | 6 | 0 |
| Utah | 37 | 38 | 34 | 2 | 2 | 4 | 4 | 4 | 3 |
| Wyoming | 39 | 30 | 30 | 0 | 0 | 0 | 2 | 1 | 1 |
| PACIFIC STATES | 610 | 539 | 357 | 13 | 12 | 8 | 111 | 88 | 44 |
| California | 431 | 357 | 210 | 2 | 2 | 3 | 84 | 65 | 36 |
| Oregon | 82 | 87 | 72 | 8 | 8 | 5 | 16 | 13 | 4 |
| Washington | 97 | 95 | 75 | 3 | 2 | 0 | 11 | 10 | 4 |
| ALASKA | 24 | 21 | 19 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAWAII | 19 | 14 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| PUERTO RICO | 18 | 23 | 5 | 0 | 0 | 0 | 9 | 9 | 0 |
| TOTAL U. S. & POSSESSIONS | 8,019 | 7,270 | 6,431 | 1,575 | 1,224 | 973 | 1,030 | 847 | 513 |
| CANADA | 351 | 282 | 90 | 0 | 0 | 0 | 23 | 12 | 6 |
| GRAND TOTAL | 8,370 | 7,552 | 6,521 | 1,575 | 1,224 | 973 | 1,053 | 859 | 519 |



Sites near Detroit

As Detroit's industrial complex spreads ever outward, it becomes more difficult to find plant sites with all the advantages of those shown above. Only twenty-six miles from downtown Detroit, and thirty-six miles from Flint, the Wixom area can draw skilled labor from both of these industrial concentrations. And it also enjoys easy access to other manufacturing points such as Lansing, Grand Rapids and Toledo. The environment is

attractive and includes a number of small lakes and several state parks.

TRANSPORTATION: Chesapeake and Ohio Railway; new expressway into Detroit.

WATER: Finest ground resources in Detroit area.

TOPOGRAPHY: Level.

UTILITIES: Unlimited electricity and gas available.

Complete Industrial Surveys of these and other Michigan sites are available to interested companies. Inquiries are handled in complete confidence and without obligation. Address: Wayne C. Fletcher, Director of Industrial Development, Chesapeake and Ohio Railway, Huntington, West Virginia • Telephone: JACKSON 3-8573.



Chesapeake and Ohio Railway

SERVING: Virginia • West Virginia • Kentucky • Ohio
Indiana • Michigan • Southern Ontario

SITE HANDBOOK

INDUSTRIAL REALTORS

California—Riverside. MARCUS W. MEAIRS CO., Marcus W. Meairs, Pres., 3910 Orange St. Local. 6 Sites. Bldgs. Funds. (New entry)

California—San Jose. LOVEGREN-L'HOMMEDIEU, RTLRS. James H. L'Homedieu, Jr., 246 S. 1st St., (13). Local. 2 Sites. Bldgs. Funds. (Revision)

Florida—Jacksonville. CHAS. E. COMMANDER & CO., Chas. E. Commander, Jr., Pres., 318 W. Forsyth St., (2). State. 8 Sites. Bldgs. Funds. (Revision)

Florida—Orlando. CHAS. E. COMMANDER & CO., Walter Prather Mgr., 1036 N. Mills St. State. 5 Sites. Bldgs. Funds. (New entry)

Illinois—Chicago. BENNETT & KAHN-WEILER, Marshall Bennett & Louis Kahnweiler, Partners, 400 W. Madison St., (6). Regional. 6. (Revision)

Pennsylvania—Philadelphia. LOUIS M. GOLDEN, JR., Louis M. Golden, Jr., Pres., Western Saving Fund Bldg., (7). Regional. 1 Sites. Bldgs. Funds. (New entry)

DEVELOPMENT FOUNDATIONS

Arkansas—North Little Rock. NORTH LITTLE ROCK IND. DEV. CORP., R. C. Davis, Pres., 117 E. Broadway. Local. 1 Sites. Bldgs. Funds. (Revision)

Michigan—Escanaba. ESCANABA FOUNDATION, Gust Asp, Pres., 710 Ludington St. Local. 2 Funds. (Revision)

Montana—Anaconda. DEER LODGE CTY. IND. DEV. CORP., Robert Boyd, Pres., 205 Main. Local. Sites. Bldgs. (Revision)

Pennsylvania—Doylstown. BUCKS CTY. IND. DEV. CORP., R. Exley, II, Ex. Dir., 50 N. Main St. Local. 1 Sites. Bldgs. Funds. (Revision)

Texas—Wichita Falls. WICHITA FALLS IND. FOUNDATION, W. A. Hotchkiss, Pres., Box 1860. Local. 2 Sites. Bldgs. Funds. (Revision)

Virginia—Danville. DANVILLE IND. DEV., INC., Howard Hylton, Secy-Treas., Comm. Bldg. Local. Sites. Bldgs. Funds. (Revision)

CONSULTING GROUPS

California—San Francisco. ROBERT KAYE & ASSOC. Robert Kaye, Pres., 400 Montgomery St., (4). Regional. 5 Sites. Bldgs. Funds. (Revision)

Florida—Tampa. ELIAS I. KELSEY, IND. ENGR., E. I. Kelsey, Prin., 412 Bon Alre Ave. T. T., (10). State. 1 Sites. Bldgs. Funds. (Revision)

UTILITIES

Louisiana—Shreveport. SOUTHWESTERN ELEC. POWER CO., John B. Struwe, Mgr. Ind. Dev., 428 Travis St. Regional. 3 Sites. Bldgs. (Revision)

Massachusetts—Boston. BOSTON GAS CO., S. E. Tappan, Mgr. Ind. Dev., 100 Arlington St., (16). Local. 13. (Revision)

Pennsylvania—Pittsburgh. THE PEOPLES NAT. GAS CO., Chas. L. Yost, Ind. Dev. Mgr., 2 Gateway Ctr., (22). Regional. 2 Sites. (New entry)

RAILROADS

Pennsylvania—Pittsburgh. BESSEMER & LAKE ERIE R. R. CO., E. J. Smith, Jr., Mgr. Ind. Dev., Frick Bldg., P. O. Box 536. (30). State. 3 Sites. Bldgs. Funds. (Revision)

INDUSTRIAL DISTRICTS

Arkansas—N. Little Rock. CENTRAL ARK. IND. PARK, INC. (G. Ted Cameron, Pres., Box 391). 1958 (In process of being organized.) (New entry)

California—Concord. CONCORD IND. DIST. (Western Pacific R. R., San Francisco, Calif.). WP RR. 300 acres total. 250 acres unsold. 1956. A-E-G-P-R-S-T-W. (New entry)

California—La Habra. THE LOCKMAN FOUNDATION IND. CTR. (Murray Hill Co., 424 E. Central Ave.). SP. UP RR. 36 acres total. 26 acres unsold. Package. (New entry)

March, 1959

100 BILLION CUBIC FEET OF NATURAL GAS



waits to serve your industry in Michigan

Expanding? You'll find it pays to investigate sites in the progressive communities served by the Michigan Consolidated Gas Company. They offer skilled labor forces, low-cost shipping, nearby ports on the coming St. Lawrence Seaway—plus the great advantage of a plentiful supply of natural gas for low-cost heating and industrial processing. Never any shortage—thanks to our vast storage fields. Natural gas is yours in an unlimited supply—on a firm or interruptible contract basis—always at substantial savings over other fuels. For confidential plant site information, contact our Industry Development Division, Detroit 26, Michigan.

MICHIGAN CONSOLIDATED GAS COMPANY

So much more for so much less—GAS naturally

CREOSOTED

**Piling, Poles, Lumber, Cross Arms,
Cross Ties**

Also Penta- and Salt-Treated Lumber

Decay and Termite Proof

Docks for Ocean Vessels



American Creosote Works, Inc.

New Orleans, La.

Plants at Pensacola, Fla.; Sildell, La.; Winnfield, La.;
Louisville, Miss.; Jackson, Tenn.

NORTHWEST AREA WEATHER FACTORS

Another in a special series concerned with the problems of weather in a plant location decision, this report features six states of the Northwest.

By M. D. MAGNUSON

California—Riverside. GENERAL MFG. SUB. #34. (S&B Construction Co., Inc.). 33½ acre lots. 1958. Package. (New entry)

Illinois—CENTEX IND. PARK. (Bennett & Kahnweiler, 400 W. Madison St., Chicago). C&NW, Milw. Rd. 750 acres total. 600 acres unsold. 1957. Package. (Revision)

Louisiana—Baton Rouge. BARGE TERMINAL IND. PARK. (Wm. Warren Munson, 340 N. 4th St.). IC, KCS RR. 550 acres total. Package. (Revision)

Michigan—Escanaba. ESCANABA IND. AREA. (Escanaba Foundation, 710 Ludington St.). C&NW, E&LS RR. 1500 acres total. C-E-F-R-S-T-W. (New entry)

New Mexico—Albuquerque. SOUTHVALE IND. PARK. (Maurice Liberman, Box 1364). 235 acres total. 235 acres unsold. Package. (New entry)

Ohio—Conneaut-Lakeville. CONNEAUT-LAKEVILLE IND. DIST. (Bessemmer & Lake Erie R. R., Frick Bldg., Box 536, Pgh. 30, Pa.). B&LE RR. 200 acres total. 200 acres unsold. 1958. Package. (New entry)

Pennsylvania—Albion. ALBION IND. DIST. (Bessemmer & Lake Erie R. R. Co., Pittsburgh). B&LE RR. 33 acres total. 33 acres unsold. 1958. Package. (New entry)

Pennsylvania—Grove City. GROVE CITY IND. DIST. (Grove City Ind. Dev. Corp., Penn Hotel). B&LE RR. 27 acres total. 27 acres unsold. 1956. Package. (new entry)

Pennsylvania—Allegheny County. ALLEGHENY IND. DIST. (Bessemmer & Lake Erie R. R. Co., Frick Bldg., Box 536, Pgh. 30, Pa.). B&LE RR. 140 acres total. 140 acres unsold. 1956. Package. (Revision)

Washington—Grtr. Seattle Area. PUGET SOUND IND. DIST. (Modern Home Bldrs., Inc., 18800 Hwy. 99, Lynwood, Wash.). 2200 acres total. 2000 acres unsold. 1957. A-C-E-G-F-T-W. (Revision)

OTHER GROUPS

Alabama—Montgomery. ALA. STATE C. OF C. L. B. Dickson, Ind. Dir., 468 Perry St. State. 12 Sites. Bldgs. (New entry)

California—Concord. CITY OF CONCORD. R. C. Stockwell, Plan. Dir., City Hall. Local. 4 Sites. Bldgs. (Revision)

California—Jackson. AMADOR CTY. PUB. REL. DEPT., Mrs. Ruth Mounter, Dir., Box 596, Local. 2 Sites. (Revision)

California—La Habra. LA HABRA C. OF C., R. H. Bennett, Secy-Mgr., 145 E. Central Ave. Local. 2 Sites. Bldgs. (Revision)

California—Redding. SHASTA CTY. ECON. COMMISSION, J. J. Stranahan, Mgr., 1340 Butte St. Local. 2 Sites. Bldgs. (Revision)

Florida—Venice. VENICE AREA C. OF C., Mae V. Wrede, Ex. Secy, Box 937, Local. 2 Sites. (Revision)

Michigan—Escanaba. ESCANABA C. OF C., Jack Schwartz, Mgr., 710 Ludington St. Local. 2 Sites. Bldgs. (Revision)

New Jersey—Vineland. CITY OF VINELAND IND. CO., Chas. V. Reilly, Chm., City Hall. Local. Sites. Bldgs. Funds. (New entry)

New Mexico—Albuquerque. SOUTHVALE IND. PARK. Maurice Liberman, Pres., Box 1364, National. Sites. Bldgs. Funds. (New entry)

South Carolina—Columbia. COLUMBIA-RICHLAND CTY. IND. DEV. COMMISSION, Andrew L. Hall, Secy-Treas., 428 Palmetto State Life Bldg. Local. 2 Sites. Bldgs. (New entry)

Texas—Austin. AUSTIN C. OF C. Vic Mathias, Mgr., 305 E. 7th. Local. 12 Sites. Bldgs. Funds. (Revision)

Texas—Wichita Falls. WICHITA FALLS C. OF C., Ivan C. Elmer, Ind. Mgr., Box 1860, Local. 14 Sites. Bldgs. (Revision)

Washington—Lynwood. PUGET SOUND IND. DIST., D. H. Healy, Box 398, International. 10 Sites. Funds. (Revision)

CANADA

Alberta—Edmonton. ALBERTA C. OF C., Derek S. Griffin, Mgr., 300 Tower Bldg., 10135-103 St. Province. 4. (Revision)

Alberta—Stettler. TOWN OF STETTLER, E. H. Weeres, Ind. Comm'r. Local. Sites. Funds. (Revision)

HAWAII

Honolulu. ECON. PLANNING & COORDINATION AUTHORITY, Geo. Mason, Dir., 1124 Miller St., (13). State. 10 Sites. Bldgs. (Revision)

This discussion is limited to the climatic implications and weather applications within the six western and northwestern States—Washington, Oregon, California, Idaho, Montana and Wyoming.

This six state area is large, roughly 650,000 square miles in size; its topography is diverse and heterogeneous, from high mountain ranges and plateaus to valleys reaching below sea level. Climatewise, this area is also "rich." For within its boundaries are located climates which are equivalent to that found in Switzerland or Scandanavia, the Mediterranean or the South Seas and the Ukraine or New Zealand.

When examining the climate of this area, three main points need to be emphasized: (a) The number of separate and distinct climates is large, (b) most of the area has an underlying thread of similarity and (c) the change of climate with distance can be rather abrupt and sharp at times.

To elaborate on these three main points as well as to explain the apparent paradox between points (a) and (b), it is necessary to look briefly at the basic factors that control the weather and climate of this area*. These weather control factors are the pressure zones of the Pacific Ocean, the topography influence, the continental influence and the effect of latitude.

I. The Pressure Zones. One of the most important climatic controls is the persistent pressure pattern that dominates the wide expanse of the Pacific

"Ocean. This pattern results in two centers of action; one, a semi-permanent high pressure area in the central Pacific and, two, a similarly semi-fixed low pressure area in the north Pacific, more commonly known as the "Aleutian Low."

The interaction of these two centers of action as well as their seasonal changes (the Aleutian Low predominates in winter while the high pressure area prevails during summer) results in a pronounced precipitation and wind regime that reaches a maximum in winter and a minimum in summer. In addition, the Pacific Ocean, itself, contributes a major stabilizing influence by modifying the temperatures.

The prevailing westerly winds carry this modifying influence for many miles inland although the effect is diminished by mountain ranges and by distance inland. For areas, particularly north of 40° latitude, the marine effect is such that the area is cooler in summer than one would expect for its latitude; in winter, it is warmer. The Continental Divide in Montana and Wyoming is about the limiting line of these effects.

II. Effect of Topography. The topography and the mountain ranges of the West are the main factors that divide the area into many as well as radically different climatic types. For example, the direct relationship between the topography and precipitation is shown in Figure 1 along an east-west line at 47° latitude.

This figure shows that both the height of the mountain barrier as well as the distance from the ocean are important considerations in the overall precipitation pattern. Also to

* Superior numbers refer to references at end of article.

the lee of each mountain range or peak are the well-marked rain shadow areas of minimum precipitation. Besides these effects on precipitation, the altitude and local relief produces contrasting temperature differences as well as variations in the growing season within relatively short distances.

III. The Continental Influence. The continental or the interior location has an important influence upon the climate of the large central land mass of the United States. The area east of the Continental Divide in the States of Wyoming and Montana comes directly under this influence. In winter, the cold Canadian air masses make frequent intrusions over this area while in summer, warm continental winds from the south are common.

Thus, the annual variation in temperature becomes much greater and the daily temperatures similarly show larger and more frequent fluctuations than more coastal locations. The precipitation regime also changes in this area with the maximum amounts in early summer.

IV. Influence of Latitude. Whereas the latitude effect—by determining the amount and intensity of solar insolation—is of primary importance over most of the United States, its effect over the West is less noticeable due to the over-riding topographic and marine influences. For not only do the isotherms (lines of equal temperature) tend to align in north-south directions but also the precipitation follows the same general pattern along contours of elevation.

Some of the indirect effects of latitude are shown in Figure 2. This table shows that there is variation of two hours in the length of daylight hours from the Canadian border to southern California. This factor along with data on sunshine can be related to the amount of supplemental illumination that might be required in a given location for an industrial plant. Also the elevation angle of the sun changes considerably over the area. This angle changes about one degree for every 70 miles in a north-south direction. Application of this fact would be in the orientation of buildings as well as for the specific design of windows and overhangs.

Climates of the Northwest. Our discussion can now turn from the causes of climate for this area to a classification of climatic types. Already it is apparent that the number of climatic

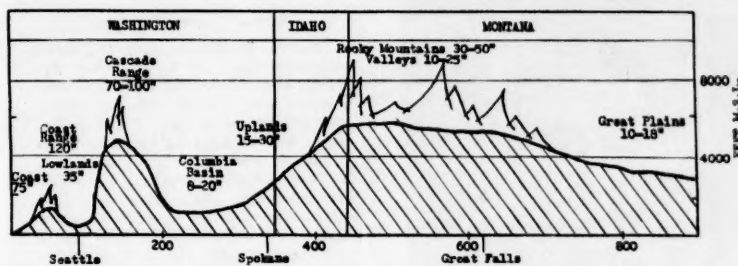


Figure 1—Topography and precipitation profile at 47° N. Latitude. (Vertical scale exaggerated 132 times.)

| | Length of Day (Hours) | | Altitude of Sun (Degrees) | |
|-----------------|-----------------------|----------|---------------------------|----------|
| | Longest | Shortest | Greatest | Smallest |
| Canadian Border | 16.1 | 8.3 | 64° | 19° |
| Mexican Border | 14.2 | 10.0 | 80° | 35° |

Figure 2—Effect of latitude upon length of day (sunrise to sunset) and the elevation angle of the sun over the western United States.

types runs into the hundreds. To reduce this number and still illustrate the many different and significant climates, it is possible to consider certain combinations of temperatures and precipitation—the basic climatic elements.

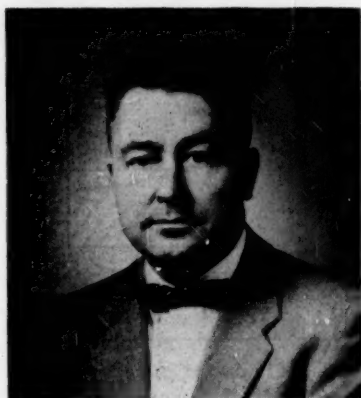
This was done and the results are shown in tabular form in Figure 3. By considering only three classes for temperatures and three for precipitation, summer and winter, it is possible to show 29 separate and distinct climates. In Figure 4, representative locations of each of these 29 types are shown.

To illustrate the classification system, we can examine data for Portland, Oregon. From Weather Bureau publications, the pertinent normals can be extracted. For the summer season, the average July temperature in Portland is 68°, average precipitation, 0.4 inch. For the winter season, the average January temperature is 39°, precipitation, 5.4 inches.

From the legend in Figure 3, Portland would be classified as a climate having warm, dry summers with cool, wet winters. This is climatic type number 10. The table further states that this type is common to valleys

| CLIMATIC TYPE* | | GEOGRAPHICAL DESCRIPTION* AND LOCATION | | CLIMATIC TYPE* | | GEOGRAPHICAL DESCRIPTION* AND LOCATION | |
|-------------------------------------|-------|--|-----|--|----------------|--|----------------------|
| Hot, Dry Summers With Winters | | | | Cool, Dry Summers With Winters | | | |
| 1. Mild and Dry | Va-Lo | Cal | Cal | 20. Mild and Moderate | Co | Cal | |
| | Up-P1 | Cal | | 21. Mild and Wet | Co | Cal, Ore | |
| 2. Mild and Moderate | Va-Lo | Cal | | 22. Cool and Moderate | Co | Wash | |
| | Up-P1 | Cal | | 23. Cool and Wet | Co | Ore | |
| 3. Cool and Dry | Va-Lo | Cal | | 24. Cold and Wet | Al | Cal, Ore | |
| | Up-P1 | Cal | | Cool, Moderate Summers With Winters | | | |
| 4. Cool and Moderate | Va-Lo | Cal, Ida, Ore, Wash | | 25. Cool and Wet | Co | Ore, Wash | |
| | Up-P1 | Cal | | 26. Cold and Dry | Al | Ida, Mont, Wyo | |
| 5. Cold and Dry | Va-Lo | Wash | | 27. Cold and Moderate | Al | Ida, Mont, Ore, Wyo | |
| 6. Cold and Moderate | Va-Lo | Ida, Ore, Wash | | 28. Cold and Wet | Al | Cal, Ida, Mont, Ore, Wash, Wyo | |
| Warm, Dry Summers With Winters | | | | Cool, Wet Summers With Winters | | | |
| 7. Mild and Moderate | Co | Cal | | 29. Cold and Moderate | Al | Mont | |
| 8. Mild and Wet | Co | Cal | | | | | |
| 9. Cool and Moderate | Va-Lo | Cal, Ore | | | | | |
| 10. Cool and Wet | Va-Lo | Ore | | | | | |
| | Up-P1 | Cal | | | | | |
| 11. Cold and Dry | Va-Lo | Ida, Wash | | | | | |
| 12. Cold and Moderate | Va-Lo | Ore, Wash, Cal, Ida, Ore, Wash, Wyo | | | | | |
| | Up-P1 | Cal | | | | | |
| 13. Cold and Wet | Al | Cal, Ore | | | | | |
| Warm, Moderate Summers With Winters | | | | a. Breakdown into climatic types based on: | | | |
| 14. Cool and Moderate | Va-Lo | Wash | | Summer (July) Temperature (°F) | | Winter (January) Temperature (°F) | |
| 15. Cool and Wet | Va-Lo | Ore, Wash | | Hot over 75° | Mild over 45° | | |
| 16. Cold and Dry | UP | Mont, Wyo | | Warm 50°-75° | 25°-45° | | |
| | Up-P1 | Ida, Mont, Wyo | | Cold under 50° | Cold under 35° | | |
| 17. Cold and Moderate | UP-P1 | Ida, Mont, Wyo | | Precipitation (In.) | | Precipitation (In.) | |
| 18. Cold and Wet | Al | Ida, Mont, Wash, Wyo | | Dry under 1" | Dry under 1" | | |
| Warm, Wet Summers With Winters | | | | Moderate 1-5" | Moderate 1-5" | | |
| 19. Cold and Dry | UP | Mont | | Wet over 2" | Wet over 4" | | |
| | | | | b. The following general geographical descriptions are abbreviated as follows: | | | |
| | | | | Al — | Alpine | Up-P1 — | Uplands and Plateaus |
| | | | | Co — | Coastal | Va-Lo — | Valleys and Lowlands |
| | | | | UP — | Great Plains | | |

Figure 3—Location and description of the Climates of the Northwest.



About The Author

Mervin D. Magnuson is the Area Climatologist, U. S. Weather Bureau, and covers the six-Northwest States and Alaska. He has been associated with the Weather Bureau for the past 12 years in positions in Iowa, South Dakota, and is currently located in Seattle, Washington. His experience includes service as a meteorologist during World War II and as a statistician with the U. S. Department of Agriculture. Academically, he graduated from Nebraska Wesleyan University and has studied at the University of Nebraska and University of California at Los Angeles.

and lowlands in Oregon and to uplands (above 1500 feet in elevation) and plateaus in California. Reference to Figure 4 indicates some of the representative locations of this type over these two states.

It can be pointed out that all classification systems (including this one) have certain inherent weaknesses. For

example, for the specific purpose of industrial air-conditioning, it would have been more correct to select certain combinations of temperature, humidity and wind movement as classification parameters. However, for general climatic purposes, the scheme above does serve to show the multiplicity of climates as well as the sharp

contrasts, in some instances, within a relatively short distance.

Climatic Elements. In any discussion of the climate—of and area—it is usually recognized that the most important element is precipitation. This can be particularly true in regard to industrial operations. For in the past—and also forecast for the future—total water use in the United States has and will continue to be doubled every 25 years.

With this increasing use and demand, water is truly becoming “the lifeblood of the nation.” Since the distribution of surface and underground water supply is basically related to precipitation, in the form of rain or snow, it is important to know of some of the characteristics of precipitation over the West. Other elements in the following order will then be treated: temperature and humidity, wind and air stability, and, lastly, the weather catastrophes.

Precipitation. Although Figures 3 and 4 give some general ideas as to the distribution of precipitation over the West, a few additional remarks on other aspects of this element might be in order. In the first place, the range of precipitation varies from less than 2 inches per year in the Death Valley in California to 150 inches in the “rain forest” of the Olympic Mountains in Washington. More generally, over two-thirds of the entire area receives yearly precipitation amounts that total less than 20 inches. To document the variations of this element, the Weather Bureau has a network of raingages averaging 1 per 300 square miles or a total of nearly 2200 locations in this six-state area.⁶

Another distinguishing feature of precipitation is the pronounced seasonal pattern. Whether the yearly moisture is small or large, the greater portion of it falls during the winter season. The only exception to this is the area east of the Continental Divide where the continental influence gives an early summer-time maximum. Equally pronounced is the lack of rainfall—the summer-time drought—which begins in late June or early July and continues rather generally through September.

Several factors can be mentioned that tend to minimize this inequitable distribution. At the higher elevations, much of the precipitation falls in the form of snow. This snow pack accumulates during the winter “wet”

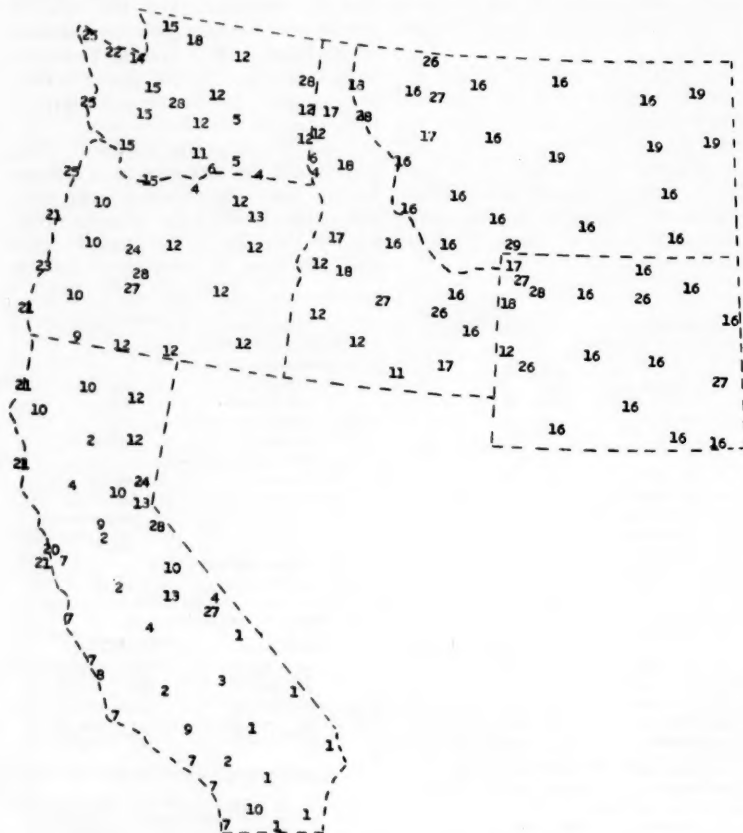


Figure 4—Representative locations of specific climatic types given in Figure 3.

WEATHER FACTORS

season and thus becomes a potential reliable source of water supply during the spring and summer melt season.

In this way, many streams and rivers are assured of a more stable year-round flow than what might otherwise be expected. As an example, the Columbia River reaches its peak flow during the season of minimum precipitation.

Also in spite of the fact that this river system flows through broad expanses of arid country, its volume of flow is second only to the Mississippi. With this source of moisture at high elevations, the West has the highest hydroelectric power potential in the nation.¹⁸, No. 1

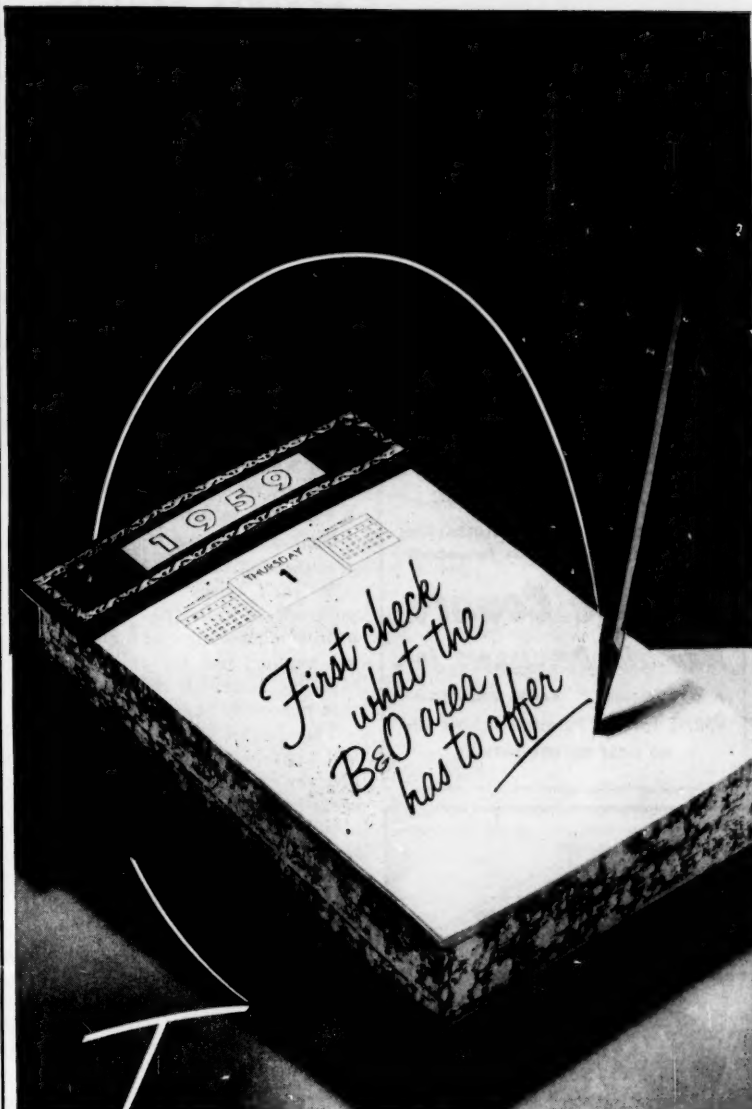
A lower rate of precipitation intensities also contributes to the conservation of the West's water supply. This is particularly helpful in reducing the amount of runoff and also assisting the recharging process for underground water supplies. Heavy bursts of rain or the more common "cloudburst" are rarely experienced—the main exceptions would be the areas under direct continental influence and the mountainous areas in southern California.

For example, Portland, Oregon, receives yearly precipitation of 40 inches. Yet the maximum downpour in one hour has not exceeded $1\frac{1}{3}$ inches. Elsewhere over the country where similar yearly rainfall occurs, these intensity rates are from 2 to 3 times greater.¹⁴ At this point, it can be further emphasized that monthly or annual precipitation amounts, whether large or small, are poor indicators of the potential rate of rainfall for short periods of time.

For this reason, the Weather Bureau has a nation-wide network of special recording precipitation gages from which short period intensities are computed and published. Around 700 gages are in this network in the West.¹⁰

Snow is important in building design and for operational problems in some locations¹² because of the additional stress that it places on roofs or because of the curtailment of unrestricted out-of-door activity. Of course, the heaviest snowfall areas are in the mountains.

The snow line in the Cascades of Washington and Oregon lowers to about 2000-3000 feet. In California, significant snowfall is confined to elevations mostly above 4000 feet in the



THIS can be your launching pad to
a better new plant space...

Choice plant sites in B&O's Land of Big Opportunity with the *markets* you want—industrial or consumer, domestic or foreign. Check the B&O area, with our help!

Plan with
a B&O
man!



PHONE OR WRITE:

T. G. GORDON, Industrial Agent
BALTIMORE 1 LExington 9-0400

G. E. FERENCE, Ind. Development Agt. A. C. TODD, Industrial Agent
NEW YORK 4 DIgby 4-1600 CINCINNATI 2 DUNbar 1-2900

FIELDING H. LEWIS, Industrial Agent W. E. OLIVER, Industrial Agent
PITTSBURGH 22 COurt 1-6226 CHICAGO 7 WABash 2-2211

BALTIMORE & OHIO RAILROAD

Constantly doing things—better!

Before you select
any Plant Site . . .

Get the facts on Orange County CALIFORNIA

LEARN WHY such companies as Ford, General Motors, Chrysler, Hughes Aircraft, Northrop, SPS, Sylvania and others choose ORANGE COUNTY as the place in which they wish to live, work and play.

**WE OFFER A COMPLETELY
COORDINATED SERVICE**

PLANT LOCATING — CONSULTATION
FLANT CONSTRUCTION — FINANCING

Orange County

Industrial Developers, Inc.

P. O. BOX 1848 SANTA ANA, CALIF.
WRITE for our Permanent Fact File
NO COST OR OBLIGATION!



ANNISTON ALABAMA

HOME OF
GENERAL
ELECTRIC

• MONSANTO

• NATIONAL
GYPSUM

THE MODEL
CITY

We do not have EVERYTHING that ALL industry wants, but we have attracted some of the leaders. Maybe we have what YOU want



Write for your
Free Copy
of
SPOTLIGHTING
ANNISTON
No Obligation

ANNISTON CHAMBER OF COMMERCE
RADIO BUILDING
ANNISTON, ALABAMA

WEATHER FACTORS

north to 6000 feet in the south, while elsewhere it ranges from 5000 to 7000 feet. Although the weight of new fallen snow varies somewhat, an average figure is about 6½ pounds per cubic foot. Old snow which has been compacted can increase this figure to 30 pounds per square foot.^{2, p. 84} In recent years there has been a substantial increase in the data published on both snowfall and snow depth.⁹ Also there are technical reports which relate the ground snow cover to roof cover conditions of various design.⁷

Snowfall, not a significant factor along the California coast, ranges from a trace on the southern coast line up to 3 inches at some northern points. Similarly the coast line of Oregon and Washington seldom receives any snow.

Temperature and Humidity. Next to precipitation, the effects of temperature⁹ and humidity become of importance to industrial interests. The problems associated with cold weather, hot weather and dry or humid conditions are somewhat different and each to a degree is found in the West.

The factors of elevation, latitude and continental influence combine to give the largest cold weather index to areas in Montana and Wyoming. Probably the best general index to cold weather and its associated problems of fuel consumption is heating degree days.

On this basis, seasonal heating degree days reach totals varying from 7000 to over 9000 degree days in Montana and Wyoming. Minimum heating requirements (seasonal values of less than 2000 degree days) are found in southern California.

Current and historic series of detailed degree-day data are now available in recent publications of the Weather Bureau.⁶ Also for planning purposes, methods have been developed for estimating seasonal degree-day probabilities²⁰ or design temperatures²¹ for any location in the country.

In hot weather climates, it becomes important to know and differentiate between the dry and humid conditions, for the factor of humidity plays an important role. The main hot and dry climates of the West are in the central valley and the southeast areas of California. With the hot sun, dry air and predominating clear skies, the control of the intense solar radiation is important.

For industry, this means large but

lightweight buildings, the maximum utilization of awnings, sunshades and other protective devices and the use of building materials of low heat absorptive qualities. Another control device that works in both dry and humid climates is a system of fine water sprays or a trickle of water on roof tops.

This control gives considerable cooling to both roofs and walls of a building. In a humid climate, it has been shown that a minimum of 10 gallons per square foot per month gave satisfactory cooling results;¹ in dry climates, the consumptive rate would undoubtedly be a little higher. For cooling and air conditioning in the dry climates, the relatively simple evaporative cooling devices are entirely adequate.

A slight but steady movement of the air is also of advantage in hot climates. This factor of ventilation is particularly important as the humidities increase but only up to a certain point.¹⁵ The warm and sultry conditions that are found in the central and eastern United States are not found in the West.¹⁹

The areas with the high temperatures in the West are the ones with low humidities or essentially arid climates. This does not mean to imply that problems associated with water vapor in the air do not exist. Actually, coastal areas and inland for some distance experience rather high relative humidities during the winter season—associated with the cloudy and rainy regime. For example, in a study of the corrosion of metals and deterioration of materials, it has been shown that the index of deterioration reaches a maximum value of 25 along the coast. (Ratings for this index range from zero in the deserts to 100 in the moist tropics.^{2, p. 186})

Wind and Air Stability. Wind speed and direction must also be taken into consideration in both the siting and construction of industrial buildings. And with the growing awareness of air pollution, a study of the atmospheric stability must be undertaken if smoke or noxious fumes must be dissipated. Wind conditions are so highly variable in the West that only some general statements can be made; however, some pertinent rules will be summarized.

Most of the area—except that part of California south of about latitude 40°—lies within the belt of the pre-

vailing westerly winds. This zone is characterized with a rather steady wind pattern and frequent weather disturbances, except in summer, result in good overturning and mixing of the air.

But there can be many exceptions to this general pattern as elevations and topography — the valleys and mountain slopes — exert local effects that may counteract or reverse the general wind patterns. Even the Columbia Basin in Oregon and Washington, a large interior depression, has wind patterns that are local and unique.

During the summer, the general circulation pattern weakens so that the winds are generally weak and erratic. Here the main exceptions are the coast line where steady northwesterly winds prevail and the area east of the Continental Divide where moderate southerly winds persist. Wind data are currently available from over 100 locations in the West.^{5, 13} However, some of these locations are non-representative of the general area so that considerable care needs to be exercised in the interpretation of all wind data.¹²

Weather Catastrophes. Any violent or unusual rare occurrence of weather phenomena can be considered a weather accident or catastrophe.¹¹ Our discussion here will be limited to a brief one of the nature and distribution of the following phenomena: hurricanes and tornadoes, thunderstorms and windstorms, blizzards and snowstorms, heavy rains and floods, and air pollution.

Hurricanes and Tornadoes. Tropical storms or hurricanes may affect S. California but not with the intensity of East Coast storms. The tornado, which is a phenomenon of primarily continental areas, reaches its greatest frequency for this area in eastern Montana and eastern Wyoming averaging 1 to 2 occurrences in each state per year. The remainder of the area has average occurrences of 1 tornado every several years. This area can be considered outside the tornado belt.

Thunderstorms and Windstorms. Although these phenomena are neither particularly violent nor rare, there are certain characteristics which bear special mention. First, thunderstorms are comparatively few and mild along the coast but increase to a maximum of about 50 per year in the mountains

of Wyoming.⁴ Hail, which is the more destructive component of some thunderstorms also follows about the same distribution patterns.⁸ Because of the variations in the size of the hail stone as well as the size of the storm path, careful interpretation of these storms is necessary. Similar care must be exercised in regard to windstorms, for here the effects of topography control the extreme nature of the storm.

For example, favored topographical locations in California give rise to the so-called "Santa Ana's," a strong and dry desiccating wind that reaches speeds exceeding 100 mph in the vicinity of mountain passes and over 60 mph at lower elevations.

Another example would be the occasional gale-like winds that funnel in both directions up and down the Columbia gorge between Washington and Oregon. These winds are extremely local in nature and considerable variations can be expected with change in elevation or in distance.

Blizzards and Snowstorms. The true blizzard — a combination of very strong winds, extremely low temperatures and snow—is confined to the States of Montana and Wyoming. Only rarely do storms of this severity occur west of the Continental Divide. As might be expected, snowstorms are common in the higher elevations of the mountains and a succession of these each winter contributes to the substantial water storage that is released each spring and summer.

Heavy Rains and Floods. For these phenomena, there are both a regional and seasonal pattern. West of the Cascade-Sierra Nevada ranges, occasional heavy rains come during the winter rainy season. Whereas the intensity of fall for periods of one hour or less are not unusually heavy^{10, 17} (generally less than one inch per hour), the flood producing rains are from substantial falls in periods of one day to one week (low intensity, high volume).

In contrast there are several areas that experience their exceptional heavy falls of rain in the summer and similarly pose a threat of some flooding of local low areas. The mountains of southern California are one area where occasional torrential downpours (high intensity but low volume) flood an isolated canyon or "dry wash" area.

Another area consists of Montana and Wyoming where downpours of

Manatee County FLORIDA



Has
EVERYTHING
for YOUR
INDUSTRY

No other area in Florida offers industry as much as Manatee County. Ideal tropical climate, ample labor supply, good industrial sites, and all transportation facilities. And right in the middle of Florida's fastest growing section.

Manatee County
COMMITTEE
OF 100
BRADENTON,
FLORIDA

WRITE FOR FREE INDUSTRIAL BROCHURE

Harry Lee, Executive Director
P. O. Box 360
Bradenton, Fla.



Name _____
Firm _____
Address _____
City _____ State _____



DO YOU HAVE ZONING PROBLEMS?

Are you having difficulty getting land zoned for expansion? Does your community need to be informed of the importance of setting aside adequate area for industrial growth?

If you need to do a selling job in the realm of industrial planning and zoning, you'll be interested in the new color sound film being produced by Industrial Sound Films, Inc., with the technical aid of the staff of INDUSTRIAL DEVELOPMENT. This new motion picture will tell why industry is needed for healthy community growth, how modern industry raises, not lowers, property values, and how fine residential and industrial areas can be good neighbors. It tells about planned industrial parks, and the trend toward performance standards in zoning ordinances.

The new film will be a companion piece to GOLD MINE ON MAIN STREET, already distributed throughout the nation to tell the story of industrial development at the local level. For full information on either film, address:

INDUSTRIAL SOUND FILMS, INC.

Conway Building, North Atlanta 19, Ga.

EXPANSION

comes naturally in **BROOK HOLLOW**

Success growth is already an established tradition in four-year-old Brook Hollow.

A food manufacturing firm has completed its second major expansion in Brook Hollow, more than doubling the size of its plant.

A chemical firm tripled the size of original Brook Hollow facilities in two expansions. Three firms recently doubled the size of their Brook Hollow facilities.

Expansion comes naturally in Brook Hollow — it was PLANNED that way. Check Brook Hollow for reasons why 170 national and regional firms have built 4,000,000 square feet of modern plant facilities there.



WEATHER FACTORS

one inch per hour or more can be expected every two years during the spring and summer months. Actually the risk of flooding by heavy rains depends not only on the nature of the ground surface but also on the slope and size of the drainage area.

Air Pollution. The atmosphere has been called the "world's greatest sewer," for man has not been too careful in controlling the amount or the type of waste products that are discharged into the air. These waste products are in various forms such as solid particles (dusts, fumes and smoke), liquids or mists, and gases or vapors.

Whenever there is an excessive release of any one or combination of these pollutants into the air or whenever the atmosphere fails to adequately disperse the pollutants, air pollution can become a major problem. In the West, the Los Angeles basin³ is known for its high incidence of "smog" during the summer and fall. Because of mountains on three sides and a persistent temperature inversion overhead, the contaminated air is prevented from escaping in any direction.

Other coastal areas with similar restricted topography are potentially areas of some air pollution because of

REFERENCES

¹ American Institute of Architects, Regional Climate Analyses and Design Data; Collection of 15 reprints for 15 areas in the United States, 1949-1952.

² Brooks, C. E. P., Climate in Every Day Life, Philosophical Library, Inc., New York, 1951.

³ Clean Air for California, Air Pollution Study Project, Department of Public Health, State of California, San Francisco, Cal., March 1955.

⁴ Climate and Man, Year Book of Agriculture, United States Department of Agriculture, 1941.

⁵ Climatology of the United States, Summary of Hourly Observations, Separates by Locations, United States Department of Commerce, Weather Bureau, 1956.

⁶ Climatological Data, Monthly Separates by States, United States Department of Commerce, Weather Bureau.

⁷ Determination of Snow Loads for Building Construction, United States Department of Commerce, Weather Bureau, May 1952.

⁸ Flora, Snowden D.: Hailstorms of the United States, University of Oklahoma Press, Norman, 1956.

⁹ Hay, A. D.: Summer Design Temperatures, Heating, Piping and Air Conditioning, June 1954, p. 154.

¹⁰ Hourly Precipitation Data, Monthly Separates by States, United States Department of Commerce, Weather Bureau.

¹¹ Industrial Operations Under Extremes

WEATHER FACTORS

the coastal-wide atmospheric condition of temperature inversion. In other areas, valley floors or small sheltered valleys also may have a potential for restricting air movement under certain conditions and should, therefore, be studied if pollutants are to be discharged into the atmosphere.

By increasing the height of a smoke stack or by choosing an alternate plant site, the problems of air pollution can be greatly minimized.

Summary. In conclusion, the West with its irregular and varied relief offers to the industrialist or business planner a wide selection of climatic types. At the same time, much of the area is free from many of the more violent weather phenomena as well as from the sudden weather changes on a day-to-day basis.

In addition, for the more hardy individual, thousands of acres of land have been dedicated as wilderness or primitive areas to remain in their natural state except for trails, etc. Area-wise, there is an abundance of space for expansion or development of industrial sites. Climatewise and businesswise, the West is truly "the land of great promise" for the future.

of Weather. Meteorological Monographs, Vol. 2, No. 9, A.M.S., May 1957.

¹² Landsberg, H. E.: Climatology Applied to Engineering, Paper presented at American Meteorological Society meeting, Centennial of Engineering, Chicago, Illinois, September 1952.

¹³ Local Climatological Data, Separates by Locations, United States Department of Commerce, Weather Bureau.

¹⁴ Maximum Recorded United States Point Rainfall, Technical Paper No. 2, United States Department of Commerce, Weather Bureau, April 1947.

¹⁵ Physiological Objective in Hot Weather Housing, Housing and Home Finance Agency, Washington 25, D. C., June 1953.

¹⁶ Rainfall Intensities for Local Drainage Design in the United States, Technical Paper No. 24, United States Department of Commerce, Weather Bureau, August 1954.

¹⁷ Rainfall Intensity—Duration Frequency Curves, Technical Paper No. 24, United States Department of Commerce, Weather Bureau, December 1955.

¹⁸ Ten Rivers in America's Future, No. 1, The Columbia; No. 2, Central Valley of California; No. 3, Missouri; from Vol. 2, The Report of the President's Water Resources Policy Commission.

¹⁹ Thom, Earl C.: Cooling Degree-Days, Air Conditioning, Heating and Ventilating, July 1958, pp. 65-72.

²⁰ Thom, H. C. S.: Seasonal Degree-Day Statistics for the United States, Monthly Weather Review, Sept. 1952, pp. 143-147.

²¹ Thom, H. C. S.: Revised Winter Outside Design Temperatures, Heating, Piping and Air Conditioning, Nov. 1956, pp. 137-142.

March, 1959

73

BALTIMORE

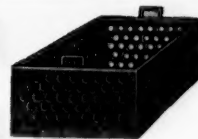
COMPETITIVE ADVANTAGES

Improving your competitive position is basic in choosing a plant site. Let us show you the outstanding competitive advantages Baltimore offers your particular business. An individual Plant Location Study is yours for the asking . . . in confidence and without obligation. Write, wire or phone our Industrial Development Service, 1102 Lexington Bldg., Balto. 3, Md.

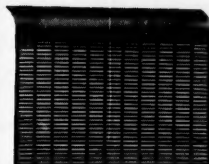
BALTIMORE GAS and ELECTRIC COMPANY

Serving one of America's great industrial centers

Perforated Metal Products and Parts



Pickling Basket



Air Inlet Screen for Oil Burner

We, of course, supply manufacturers with perforated metal sheets and plates in a wide variety of sizes and shapes, from which they produce their own products and parts, but we are also fully equipped to relieve them of a great deal of this work. We weld, spot-weld, or rivet, stiffeners and angles to the pieces and can form or flange them to special shapes as required. The items here shown are typical of hundreds we have furnished to other manufacturers during nearly a half century of successful experience.



Perforated Metal, spot-welded to specially formed angles.

YOU'LL SAVE MONEY in most cases, by placing orders with us for perforated metal parts, to be delivered in lots throughout the year in accordance with your production schedules. Specialized equipment and procedures will usually enable us to do the work at lower cost than it could be done in your own shops.

Send us your blue prints and specifications. When given sufficient information, our engineers are often able to make money-saving suggestions and always welcome an opportunity to do so.

DIAMOND MANUFACTURING CO., WYOMING PENNA.
(Wilkes Barre Area)

New Bulletin No. 51, Describes DIAMONTEX Perforated Metal Lay-in Panels for Modern Acoustical Ceilings.

EDITORIAL SURVEYS . . .

and plant location reports

Since before the turn of the century MANUFACTURERS RECORD has issued special studies of specific cities and areas to assist the site-seeking industrial firm. Today, through the combined coverage of INDUSTRIAL DEVELOPMENT and MANUFACTURERS RECORD this tradition of leadership in this field is being extended and carried forward.

Before you go site-seeking, take advantage of background studies which have already been prepared for the areas listed below. Generally, reprints are available gratis.

| Area | Publication | Date |
|------------------------------------|-------------|-----------------|
| Washington, D. C. | | |
| Area (ID-MR) | | Feb., 1959 |
| Cleveland Corridor (ID-MR) | | Jan., 1959 |
| West Texas (ID-MR) | | Jan., 1959 |
| Rome and Floyd County, Ga. (ID-MR) | | Dec., 1958 |
| Sacramento (ID-MR) | | Nov., 1958 |
| North Carolina (ID-MR) | | Oct., 1958 |
| Orange County, Calif. (ID-MR) | | Sept., 1958 |
| Erie County, Pa. (ID-MR) | | Aug., 1958 |
| New Bedford, Mass. (ID-MR) | | Aug., 1958 |
| Lower Va. Peninsula (ID-MR) | | July, 1958 |
| Mattoon, Ill. (ID-MR) | | June, 1958 |
| Florida Bay Area (ID-MR) | | June, 1958 |
| Western Mississippi (ID) | | May, 1958 |
| Savannah Ga., area (MR) | | May, 1958 |
| Knoxville, Tenn. (MR) | | April, 1958 |
| Charleston, S. C. (MR) | | March, 1958 |
| Dallas, Tex. (MR) | | Feb., 1958 |
| Louisiana (ID) | | Jan., 1958 |
| Cobb County, Ga. (MR) | | Jan., 1958 |
| Arizona (ID) | | Dec., 1957 |
| Pennsylvania (ID) | | Sept., 1957 |
| Canada (ID) | | Aug., 1957 |
| Petersburg, Va. (MR) | | Aug., 1957 |
| Southwest Ga. (MR) | | July, 1957 |
| Charlotte, N. C. (MR) | | Feb., 1957 |
| Meridian, Miss. (MR) | | Jan., 1957 |
| Little Rock, Ark. (MR) | | Oct., 1956 |
| Raleigh, N. C. (MR) | | Aug., 1956 |
| North Carolina (ID) | | July-Aug., 1956 |
| Memphis, Tenn. (MR) | | May, 1956 |
| Jackson, Miss. (MR) | | March, 1956 |

Day publications, inc.

NORTH ATLANTA 19, GA.

offices

in

principal

cities

cover story

The Quaker Oats Company

PROGRESS FROM TALENT AND

By Donold Lourie

President, The Quaker Oats Co.

The president of one of America's most successful food manufacturing firms details here his company's method of planning expansion to meet ever-growing consumer needs.

The food industry has been one of the bright spots in the general business picture, with total sales in 1958 running three to four per cent above the figures for the previous year.

Total consumer expenditures for food are estimated to have been approximately 77 billion dollars in 1958. Some long-term forecasts call for an additional 30 billion dollars by 1965, in terms of today's prices, to meet the demands of an ever-growing population.

We have been a part of this industry for many years. Quaker Oats and Mother's Oats are still our most important products, and I am happy to report that today there are more people eating Quaker Oats and Mother's Oats than ever before.

Our best known ready-to-eat cereals probably are Puffed Wheat and Puffed Rice. Our Pack-O-Ten contains individual packages of these cereals plus Wheat Flakes, Rice Flakes and Corn Flakes. We produce many other food products sold under the Quaker, Aunt Jemima and Flako trademarks.

Our Institutional and Industrial Sales Department is actively developing business with governmental agencies and all types of institutional outlets. Some new products have been developed for this field, especially for industrial users in the processing of foods for human consumption.

We receive reports on grocery store product movement in the 11 product classes in which we have an interest. Our products in nine of the 11 showed increases over physical volume in 1958,

TECHNOLOGY

Donald B. Lourie, who served as Undersecretary of State during 1953 and part of 1954, got his start with Quaker Oats as a statistics clerk in the accounting department at Chicago in July of 1922. The following December he began as a trainee with the company in Cedar Rapids, Iowa. He subsequently moved to the feed sales department in Chicago, and from there he progressed to the positions of advertising manager and then sales manager. He was named vice president-sales in May, 1942, executive vice president in November, 1943, and president in November, 1947.

Following his Government service he was reelected president of Quaker Oats in May, 1954. Mr. Lourie is a director of the company as well as of several other companies and is active in a number of public affairs endeavors. A native of Decatur, Alabama, he is a graduate of The Phillips Exeter Academy and Princeton University.



and our brands are first in seven of those 11 classifications.

Despite general opinion, the food industry is a very rapidly changing business. About two-thirds of today's grocery store sales are on products which are entirely new or have been basically improved in the last 10 years. Of that two-thirds, about 50 per cent are entirely new items, and the other 50 per cent items basically improved, such as instant coffee and instant oatmeal.

Convenience foods continue to grow in demand. A transfer has taken place in the preparation of food from the home kitchen to the food processing plant. A few years ago it took five and a half hours to prepare a day's food for a family of four. Today, comparable meals can be prepared in about an hour and a half.

Improved processing such as dehydration, precooking and freezing, along with improved packaging and better nutritional values have made important contributions to the food field. Recent technological developments show that the test tubes are full of new developments with tremendous growth potentials.

Realizing the constantly growing demand for convenience foods, The Quaker Oats Company has in the past few years developed a number of new items such as Instant Oats, Instant Macaroni, Frozen Waffles, Frozen Pancakes, and convenient ready-mixes for corn bread, oatmeal bread and coffee cake!

Another example is Quaker Masa Harina. This is a product designed for

Latin Americans in the Southwestern and Far Western states. It is used to make dough for tortillas just by the addition of water.

The items to which I have referred have come out of our laboratories and Product Development Department. The latter has been charged with the responsibility of developing new products, improving our present ones, and considering possible acquisitions.

Being processors of grain, we have for many years been in the commercially mixed feed business. The commercial feed industry is more than a \$3 billion business, serving the poultryman, dairyman and livestock producer. The estimate is that the feed business will have to increase by at least 50 per cent by 1975 to satisfy the needs and improving diet of our expanding population.

Distribution of feeds is rapidly changing. Poultry integration has gradually moved the business from the farms of the middle West to the South and Southeast. Bulk trucks, bulk tank cars, and bulk distribution points are needed to give service and meet competition. Many of the feeds being used by the large commercial feeder never come in contact with sacks.

In order to meet the changing pattern of the feed business, we have been rearranging our own manufacturing and distribution system. Ten years ago most of our feed was shipped to the dealer or feeder directly from eight mills in the United States and Canada. We have now added four more major mills, a number of small or satellite mills, and are distributing through ap-

proximately 150 warehouses and distributing stations.

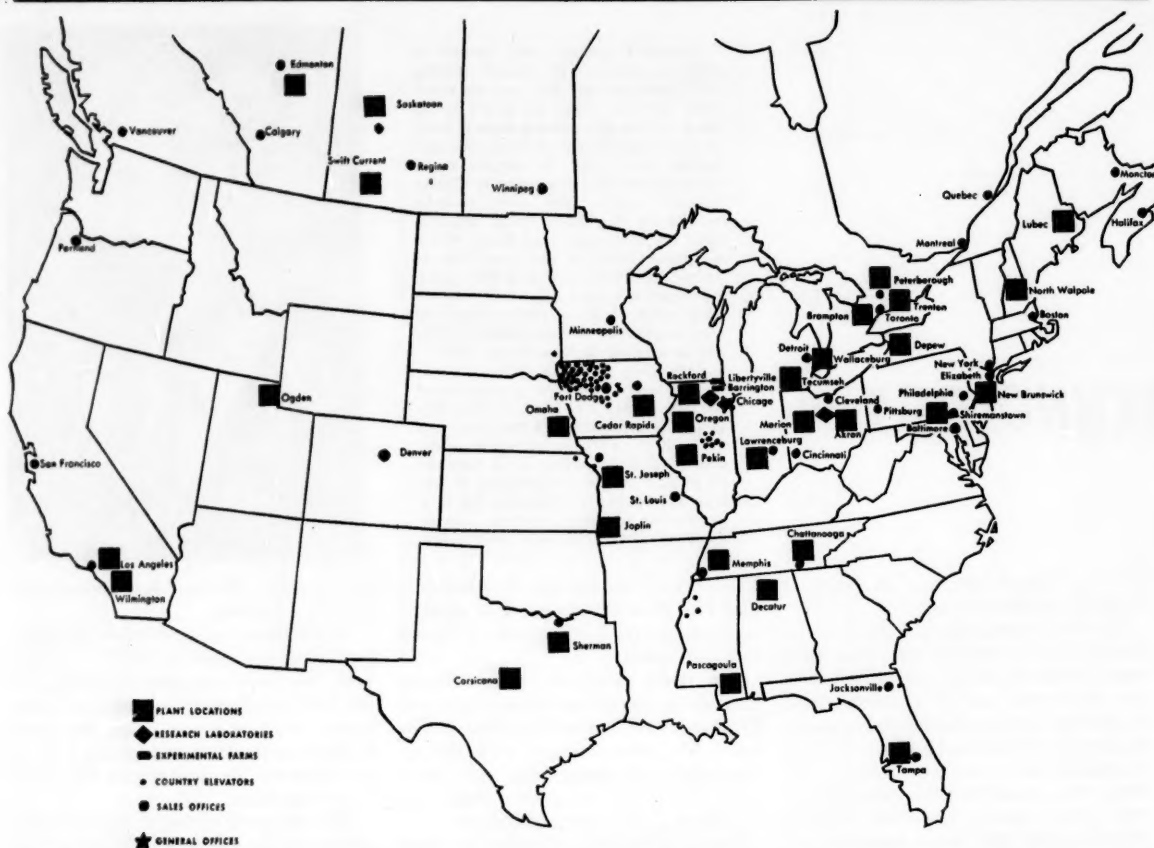
In addition, our 60 country elevators have been modified to help distribute feed. We have equipped our mills for the bulk handling of incoming and outgoing items and are using the most modern methods of getting the feed as economically as possible to the point of consumption.

Following a long-range plan of diversification, the company launched into the pet food field some 17 years ago. There are about 23 million cats and more than 25 million dogs in this country. The number of cat owners increased about 25 per cent and the number of dog owners about 15 per cent in the last three years. It is interesting to note that the cat and dog population is growing several times faster than the human population.

The industry growth of pet foods has attracted many new producers, and competition is greater than it has ever been. We have been able to maintain our leadership, with Ken-L-Ration for dogs and Puss 'n Boots for cats being number one in their respective fields.

For the past 35 years the Quaker Oats Company has been in the chemical field. From oat hulls, a major by-product, we developed furfural. Originally, it was used as a substitute for formaldehyde. Now it has 50 or 60 various uses, the major one being in the manufacture of nylon. It is also used in the manufacture of resins and synthetic rubber, and in oil refining. Furfural is being made from other agricultural waste materials such as corncobs, cot-

QUAKER OATS



Quaker Oats' more than fifty-three different products are manufactured and distributed from more than forty plants in the United States, Canada and seven foreign countries. The map above illustrates the dispersal of these and other Quaker Oats facilities in the United States and Canada.

tonseed hull bran, and bagasse, which is sugar cane residue.

We believe in and are committed to an aggressive research program. Our research expenditures are currently running well above \$2 million a year. We have been for two years in full scale operation in our new John Stuart Research Laboratory at Barrington, Illinois. In addition, we have a poultry experimental farm at Libertyville, Illinois, and a dairy cattle, livestock, and hog research farm near Barrington where we also have a new pet research center. We maintain a Mechanical Development Department at Akron, Ohio.

The amount of our property, plant and equipment has been increasing each year and is now two and three quarter times as much as it was ten years ago. Our gross capital expenditures have averaged \$7.5 million a year for the past decade. We have no reason to assume that, based on our present plans, there will be any material change from this pattern over the period of the next few years.

Our 1957-58 fiscal year was a record one for us in sales and earnings. Our total sales of \$314,517,368 did not include those of the non-consolidated companies and compared with sales of \$302,637,511 in the 1956-57 fiscal year. Net income for the year ended June 30, 1958, was \$12,917,701, as compared to \$12,129,716 in the previous period.

Sales outside the United States included in the consolidated report above amounted to \$43 million in the latest period. In addition the non-consolidated companies had sales of \$36 million. The non-consolidated companies' net income converted to U. S. dollars at present rates of exchange amounted to approximately \$2.6 million as compared to \$2.4 million reported for the previous year.

Included in the non-consolidated companies are the subsidiaries in England, Holland, Denmark and Germany, as well as in Colombia, Argentina and Brazil. A substantial share of the earnings of these companies is being in-

vested locally to finance their continued growth.

In February, we reported sales of \$165,310,339 for the first six months of our 1958-59 fiscal year, compared with \$156,246,026 in the same period of the previous year. Because of rising costs, our net income in the period declined to \$7,388,098, from \$8,096,848 in the same six months of 1957. Gains in volume are being maintained, however, and if our estimates hold, our earnings in the first six months of 1959 should be higher than in the same six months of 1958.

Among new foreign projects are additional grain storage facilities in Naskov, Denmark; addition of substantial manufacturing facilities at Southall, England, and expansion of plants in South America.

Our long-range plans of diversification, research and continuous expansion have resulted in continuous growth of our markets and income, and we are certainly optimistic about the future.

RECENT RELEASES



By Suzanne Johnson

For Your General Check List

What Modern Marketing Means to Corporate Success. Selected papers from Proceedings of the Annual Spring Meeting of the National Association of Manufacturers Marketing Committee.

In these papers leading corporate executives share with the readers an understanding of the structure and philosophy of the marketing operations under which their own companies have moved to the top of their industries. National Association of Manufacturers, 2 East 48th Street, New York, New York. 32 pages. 50 cents.

Planning, 1958. Selected papers from the National Planning Conference, May, 1958. Subjects covered include Urban Design, Preparing the Zoning Case, Urban Renewal, Planned Industrial Districts, Planning in Latin America, Campus Planning, Public Housing, Research in Planning. American Society of Planning Officials, 1313 East 60th Street, Chicago, Illinois. 262 pages. \$5.00.

The Municipal Year Book, 1958 edited by Orin F. Nolting and David S. Arnold. An authoritative resume of activities and statistical data of American cities. Divisional headings include Governmental Units, Municipal Personnel, Municipal Finance, Municipal Activities and Directories of Officials. Included is up-to-date material on forms of city government, how the mayor and council are selected, utilities owned and operated, salaries of chief municipal officers, personnel organization, city financial data, fire and police departments, municipal parking lots, directories of city officials, and model municipal ordinances. International City Managers' Association, 1313 East 60th Street, Chicago, Illinois. 598 pages. \$10.00.

Supplement No. 5 to the Fourth Edition of the Directory of Important Labor Market Areas. This supplement provides a consolidated listing of all areas officially defined and added to the Bureau of Employment Security area classification program during the period between the release of the main "Directory" in July 1954 and June 30, 1958. U. S. Department of Labor, Bureau of Employment Security, Washington 25, D. C. 195 pages.

For Your Area Check List File

Pennsylvania Tax Guide for Manufacturers. This report is a brief summary of the tax systems in Pennsylvania and seventeen other states, as these systems concern a manufacturing firm. Many details are omitted, but the main outlines of the taxes included are as reported in national publications during June, 1958.

The report covers taxes on the incomes of corporation executives, general property taxes, initial organization taxes and annual corporation taxes.

States included are Pennsylvania, New York, New Jersey, Ohio, Maryland, West Virginia, Delaware, Indiana, Illinois, Michigan, Massachusetts, California, Texas, Florida, Connecticut, Rhode Island, Virginia and Alaska. Pennsylvania Department of Commerce, Industrial Development Bureau, Harrisburg, Pennsylvania. 41 pages.

Proceedings of the First Annual Western New York Industrial Development Conference. Buffalo Chamber of Commerce, 238 Main Street, Buffalo, New York. 100 pages.

Income in New Mexico—1957 by Vicente T. Ximenes. Bureau of Business Research, University of New Mexico, Albuquerque, New Mexico. 8 pages.

Washington State Industrial Handbook. Basic economic data and the unique section devoted to an inventory of approximately 300 individual industrial sites in all areas of the state. Washington State Department of Commerce & Economic Development, General Administration Building, Olympia, Washington. 151 pages. \$1.50.

Yuma: Its Economic Growth and Land Use Potential. Prepared for the City and County of Yuma by Stanford Research Institute, Menlo Park, California. 187 pages. \$7.50.

Alaska Resource Development Board, Biennial Report, 1955-57. Alaska Resource Development Board, P. O. Box 2391, Juneau, Alaska. 74 pages.

Industrial Characteristics of The Virginia Peninsula. This study covers the 400 square mile area of southeastern Virginia. Its primary purpose is to provide a factual survey of the area's principal characteristics—physical, governmental, economic and environmental. Peninsula Industrial Committee, P. O. Box 92, Newport News, Virginia. 141 pages. \$2.50.

La Fayette, Georgia Industrial Survey. Ronald P. Saylor, 514 N. Parkdale Avenue, Chattanooga, Tennessee. 16 pages.

1959 Industrial Survey of Georgia. This survey provides factual data for firms having current or potential interest in Georgia for a new plant location. Brief reports are given on numerous subjects, plus sources for additional data and many helpful services available without cost. Georgia State Chamber of Commerce, 900 Forsyth Building, Atlanta, Georgia. 39 pages.

HOW MANY REAL FACTS DO YOU HAVE ABOUT THE SOUTH?

Did you know that the South is now America's fastest growing industrial and consumer market?

The Southern Business Letter brings to your desk every two weeks the most up-to-date, useful information about this fascinating and productive region available anywhere!

for a sample copy and rates, write:

SOUTHERN BUSINESS LETTER
2592 Apple Valley Road
North Atlanta 19, Georgia



Industrial Districts

The following planned industrial districts have sites available for immediate construction. Advantages offered by such districts are described in detail in the November-December 1954 issue, pages 6, 7, and 8.

Services offered are indicated by the following code: (A) Architect & Engineer; (C) Construction; (E) Electric Power; (G) Natural Gas; (F) Financing; (P) Paved Streets; (R) Rail Sidings; (S) Sewers; (T) Telephone; (W) Water.

Iowa

IOWA "MANUFACTURING MEADOWS"—Clinton, Iowa (population 35,000). 138 miles west of Chicago on Mississippi River and Lincoln Highway (U. S. 30). 190 acres within city. Master plan by Skidmore, Owings & Merrill. Served by Chicago and North Western Railroad. Developed by Clinton Development Company, a civic-non-profit corporation. CHapel 2-4536. R. J. Stapleton, Managing Director. Services available: (a) (optional), (c), (e), (g), (f) (optional), (p), (r), (t), (w), restrictions.

Missouri

PAGE INDUSTRIAL CENTER—St. Louis—planned industrial park, developers—Page Industrial Center, Inc., 7811 Carondelet, St. Louis 5, Mo., Edward L. Bakewell, Realtor, CEntal 1-5555, on Rock Island lines. 60 acres with all services available on property. Restrictions.

Georgia

METROPOLITAN ATLANTA—Five Industrial Districts offering planned sites of varying location, size, price. Services available: (A) optional, (C), (E), (G), (F) optional, (P), (R), (S), (T), (W). In your Southeastern plant or warehouse survey contact: F. Wm Broome, Industrial Manager, DeKalb County C of C, 250 E. Ponce de Leon Ave., Decatur, Ga. (Atlanta phone, DRake 8-3691).

IMPORTANT—when replying to classified advertisements with no address given, write ID Box, Conway Publications, Inc., North Atlanta 19, Ga.

Available Sites

Near the Crowd—But Not in It

Middlesex County, N. J. 20 Miles from New York—50 Miles from Philadelphia. On U. S. No. 1, N. J. Turnpike and Mainline P.R.R. Write for Booklet.

Middlesex County Industrial Department, County Record Bldg., New Brunswick, N. J.

SUBURBAN ATLANTA—Sites of 3, 5, 10, 25, 50, 100 or more acres. All utilities and rail service in DeKalb County—Georgia's newest industrial area. 70% urban with more than 200 industries in industrial districts and individual tracts. For your new Southeastern plant or warehouse location—inquire and visit through F. Wm. Broome, Industrial Manager, DeKalb County C of C, 250 E. Ponce de Leon Ave., Decatur, Ga. (Atlanta phone, DRake 8-3691).

FLORIDA LONG SHOT: Here's a good bet for an executive who wants to make a small investment in undeveloped Florida property. Priced low, this tract may appreciate ten times in few years. Best suited now for winter hideaway, subdivision possibilities later. Reply to ID Box 3-2.

BALTIMORE HARBOR PROPERTIES — 3 Acres up; Imp. & unimproved, with both rail & water. Town & Country Realty, 32 E. 25th St., Baltimore 18, Md.

Buildings For Rent

Childress, Texas—24,000 sq. ft.—completely sprinkled—1 story, all brick—concrete floor—R.R. siding and truck loading platform—13 ft. ceiling—very favorable labor market—low rental. Write Childress Chamber of Commerce.

Special Services

MOTION PICTURES DESIGNED FOR YOU

—We are geared to produce full-color, sound motion pictures at remarkably low cost for business firms and promotion groups. Our work is professional, top-quality. We've served clients throughout the country. Get our bid before contracting for your next production. INDUSTRIAL SOUND FILMS, INC., 2592 Apple Valley Rd., North Atlanta 19, Ga.

SELLING SOUTHERN MARKET? If you're marketing a business product in the South, you need the confidential bi-weekly SOUTHERN LETTER to keep posted on new sales opportunities. Write for sample—no obligation. Box SL, Conway Publications, North Atlanta 19, Ga.

COMPANY IDENTIFICATION SERVICE

—Does your firm need to be better known in the industrial world? Would increased prestige for your top executives be valuable? Are you planning a new stock issue, a major expansion, or new product release which needs the support of wide news coverage? If so, investigate the plan whereby specialists on our staff may advise and assist you. Box CIS, INDUSTRIAL DEVELOPMENT, 296 Madison Ave., New York 17, N. Y.

Personnel Placement

WANTED: Manager, Greater New Castle (Pa.) Association, to handle industrial development and direct staff on local civic problems. Salary commensurate with experience and ability. Write Chas. S. Bowden, 19 E. Washington St., New Castle, Pa.

IND. DEV. EXECUTIVE—13 YEARS' EXPERIENCE 150 CONTRACTS—WATERFRONT SPECIALIST. Available Soon. Prefer Deep South. Salary \$12,000. Write ID Box 3-1.

Business Opportunities

INVESTMENT OPPORTUNITY—Substantial individual launching new development venture needs \$25,000 to \$100,000 in additional financing. Project is national in scope, professional in character, and has excellent long-term possibilities. This is an investment which would appreciate greatly under threat of another World War. Negotiations will be strictly confidential. Contact ID Box 3-3.

RATE INFORMATION

CLASSIFIED RATES: \$4 per line for 1-time insertion, \$3 per line for 12-time insertion. Estimate about 40 spaces in each line, allowing for box number.

PROFESSIONAL CARD & SIR RATES: \$30 per column inch for 1-time insertion, \$23 per column inch for 12-time insertion.

BOX NUMBERS: Publisher will assign box and relay correspondence on a confidential basis if desired.

PROOFS: Not furnished on classified ads.

PACIFIC NORTHWEST...PUGET SOUND REGION

Economic data on request

Plant location services

Area Development Department

PUGET SOUND POWER & LIGHT COMPANY

860 Stuart Building • Seattle 1, Washington

Stewart G. Neel, Manager

Directory of Professional Services



Ford, Bacon & Davis Engineers

DESIGN
CONSTRUCTION

NEW YORK

APPRAISALS
REPORTS

CHICAGO : LOS ANGELES
MONROE, LA. : TORONTO : VANCOUVER

PALMER & BAKER ENGINEERS, INC.

CONSULTING ENGINEERS — ARCHITECTS

Surveys—Reports—Design—Supervision—Consultation
Transportation and Traffic Problems
Tunnels—Bridges—Highways—Airports
Industrial Buildings
Waterfront and Harbor Structures
Graving and Floating Dry Docks
Complete Soils, Materials and Chemical Laboratories

MOBILE, ALA.

NEW ORLEANS LA.

WASHINGTON, D. C.

DE LEUW CATHER & COMPANY Consulting Engineers

TRANSPORTATION,
PUBLIC TRANSIT
AND TRAFFIC PROBLEMS

Industrial Plants Grade Separations
Railroads Expressways
Subways Tunnels
Power Plants Municipal Works

150 N. WACKER DRIVE,
CHICAGO 6, ILL.

79 McALLISTER STREET,
SAN FRANCISCO, CAL.

LOCKWOOD GREENE ENGINEERS, INC.

ENGINEERS — ARCHITECTS

INDUSTRIAL • COMMERCIAL •
INSTITUTIONAL

New York 17, N. Y.
41 E. 42nd St.

Boston 16, Mass. Spartanburg, S. C.
316 Stuart St. Montgomery Bldg.

PROCTOR-INGELS

Engineers & Consultants

915 South Limestone Street
Lexington, Kentucky
Telephone 5-3140

SPECIALISTS IN PLANT LOCATION
INDUSTRIAL PARKS

GUSTAVE M. GOLDSMITH Consulting Engineer

General Structures
Plant Layout
Design—Investigation—Quantity Survey
1734 Bella Vista CINCINNATI 37, OHIO



Society of Industrial Realtors

Members of SIR offer professional service in the handling of your industrial real estate problems. Firms listed below have met strict membership requirements and are fully equipped to assist in selecting sites for manufacturing plants, warehouses, offices, and other facilities. Membership includes more than 500 firms and individuals throughout the nation.

ERIE, PENNA.

Commercial—Industrial
WAY REALTY CO.
1310 Baldwin Bldg.

Ph. 2-2582

Ph. 2-4884

CHATTANOOGA INDUSTRIAL—COMMERCIAL Real Estate Management, Inc.

SCOTT N. BROWN, SIR, Pres.
709 Chestnut Street Tel. AM 5-3151

Columbus, Ohio

The Growth City of the Midwest

ROBERT G. DENMEAD

Member, Society of Industrial Realtors
Sales • Leases • Appraisals

57 East Gay St. CA 4-4249

FEIST & FEIST

Real Estate & Insurance

58 Park Place Mitchell 3-
Newark 2, New Jersey 8500
Irving Feist
Member of Society of Industrial Realtors

PROBLEMSOLVER LABORATORY

Consultant-Devisors . . . of specialized
commercial and industrial procedures
BOX 396 ATLANTA 22, GEORGIA

When you need
professional advice—
Consult a
professional



This Mailing List Can Serve You!

The banks of address plate trays holding the names of INDUSTRIAL DEVELOPMENT readers represents years of compilation effort. Today, this list includes 16,000 key executives, including more than 8,000 company presidents in the East and Midwest. Write for details of mail service plan whereby you may use these plates to address your direct mail promotion material.

CIRCULATION DEPARTMENT
Conway Publications, Inc., North Atlanta 19, Ga.

(Mail to Industrial Development & Manufacturers Record, Conway Bldg., North Atlanta 19, Ga.)

Yes! enter my subscription immediately. .

() For two years \$20 () For one year \$12
PAYMENT: () Enclosed () Bill firm

Note: A 50% Discount is Allowed for Manufacturers

FIRM
NAME TITLE
STREET
CITY ZONE STATE

EXPANSION PLANNING INDEX

For prompt assistance with your planning problems, consult these alert advertisers who are represented in this issue of ID-MR:

PLANT LOCATION SERVICES:

Alabama Power Company, W. Cooper Green, Vice President in charge of Industrial Development, 600 North 18th St., Birmingham, Ala. (Ad page 53).

American and Foreign Power Company, Inc., S. A. LaFaso, Advertising Manager, 2 Rector St., New York 5, N. Y. (Ad page 11).

Anniston Chamber of Commerce, Leonard A. Gilbert, Manager Radio Bldg., Anniston, Ala. (Ad page 70).

Arkansas Industrial Development Commission, William R. Ewald, Jr., Chief of Development, State Capitol, Little Rock, Ark. (Ad 4th Cover).

Baltimore Gas and Electric Company, Robert J. George, Industrial Development Engineer, 1102 Lexington Bldg., Baltimore, Maryland. (Ad page 73).

Baltimore and Ohio Railroad Company, John Collins, General Freight Agent, Baltimore & Charles Sts., Baltimore, Md. (Ad page 69).

Frank G. Binswanger, Inc., Frank G. Binswanger, 1420 Walnut St., Philadelphia, Pa. (Ad page 3).

Blackhawk Industrial Development Promotion Association, John A. Smithers, 1610 Fifth Ave., Moline, Ill. (Ad page 52).

Greater Burlington Industrial Corporation, Charles D. Townsend, Executive Director, Box 613, Burlington, Vt. (Ad page 4).

Central Illinois Public Service Company, Jay Paul Wade, Manager of Advertising and Public Relations, Illinois Bldg., Springfield, Ill. (Ad 2nd cover).

Chesapeake and Ohio Railway, Wayne C. Fletcher, 1103 C & O Bldg., Huntington, W. Va. (Ad page 64).

Colorado Department of Development, Lewis R. Cobb, Executive Director, State Capitol, Denver, Colo. (Ad page 2).

Far Views Development Company, A. J. Mosby, President, Radio Central Bldg., Missoula, Montana. (Ad page 5).

Florence Chamber of Commerce, Harry W. Hiett, Jr., Executive Vice President, 131 W. Evans St., Florence, S. C. (Ad page 5).

Johnson City Chamber of Commerce, Inc., Richard A. Boykin, Industrial Director, 339 East Main St., Johnson City, Tenn. (Ad page 1).

The Kinnear Manufacturing Company, H. H. Nutter, Vice President, 1191 Fields Ave., Columbus 16, Ohio (Ad page 58).

Knoxville Chamber of Commerce, Charles F. Herd, Industrial Director, Hotel Andrew Johnson, Knoxville, Tenn. (Ad page 4).

LaSalle - Peru - Oglesby - Spring Valley Chamber of Commerce, Robert W. Blomgren, Director of Industrial Development, 126½ Marquette St., LaSalle, Ill. (Ad page 3).

Manatee County Committee of 100, Harry Lee, Executive Director, Box 360, Bradenton, Fla. (Ad page 71).

Michigan Consolidated Gas Company, R. L. Gage, Manager, Industrial Development Division, 415 Clifford St., Detroit, Mich. (Ad page 65).

Monroe Area Industrial Development Corporation, Walter Koch, Executive Vice President, Virginia Hotel Bldg., Monroe, La. (Ad page 4).

New York Central System, W. J. Marshall, Industrial Department, 466 Lexington Ave., New York, N. Y. (Ad page 62).

Nickel Plate Road, Martin H. Markworth, Industrial Commissioner, Terminal Tower, Cleveland, Ohio (Ad page 52).

State of North Carolina, Department of Conservation and Development, William P. Saunders, Director, Raleigh, N. C. (Ad page 55).

Orange County Industrial Developers, Inc., Jess N. Stafford, 123 E. 11th St., Santa Ana, Calif. (Ad page 70).

Puget Sound Power and Light Company, Frank McLaughlin, President, 860 Stuart Bldg., Seattle 1, Wash. (Ad page 78).

St. Petersburg Chamber of Commerce, Jack Bryan, Industrial Director, 4th St. & 3rd Ave., St. Petersburg, Fla. (Ad page 51).

South Carolina National Bank, Chauncey W. Lever, Vice President, S. C. Nat'l. Bank Bldg., Greenville, S. C. (Ad page 2).

Southern Railway System, B. E. Young, Assistant to President, 15 and K Sts. N. W. Washington 13, D. C. (Ad 3rd cover).

Southwestern Electric Service Company, E. W. LeNeveu, Mercantile Bank Bldg., Dallas, Texas (Ad page 4).

Texas Power and Light Company, James D. Eppright, Director of Industrial Development, Fidelity Union Life Bldg., Dallas, Texas. (Ad page 50).

Toronto Industrial Leaseholds, Vera Norman, Executive Assistant, 12 Shepard St., Toronto, Ontario, Canada. (Ad page 5).

Tracy District Chamber of Commerce, George Sawyer, Manager, Tracy Inn Bldg., Tracy, Calif. (Ad page 5).

Union Pacific Railroad, A. C. Ritter, General Manager of Properties, 1416 Dodge St., Omaha, Neb. (Ad page 57).

West Texas Utilities Company, W. P. Sayles, Industrial Department, 1062 N. 3rd, Abilene, Texas. (Ad page 56).

Windsor Properties, Inc., W. C. Windsor, Jr., President, 211 Mercantile Commerce Bldg., Dallas, Tex. (Ad page 72).

PLANT CONSTRUCTION AND INDUSTRIAL SERVICES:

American Creosote Works, Inc., S. B. Brasclman, Jr., Vice President, 1305 Dublin St., New Orleans, La. (Ad page 65).

Diamond Manufacturing Company, Wyoming-Wilkes Barre Area, Pa. (Ad page 73).

Porto Rico Iron Works, Inc., Luis A. Ferre, Director, P. O. Box 1589, Ponce, Puerto Rico. (Ad page 15).

Southeastern Plastics Sales Company, Bradford L. Nicholson, 610 Morosgo Dr., N. E., Atlanta, Ga. (Ad page 56).

Southern Lightweight Aggregate Company, A. C. Ford, Advertising Manager, 2508 Chamberlayne St., Richmond, Va. (Ad page 61).

OTHER SERVICES:

Government Development Bank for Puerto Rico, 37 Wall St., New York, N. Y. (Ad page 13).

Industrial Sound Films, Inc., Stancel L. May, Jr., Sales Manager, 2592 Apple Valley Rd., N. Atlanta 19, Ga. (Ad page 72).

Interstate Motor Freight System, Grand Rapids, Mich. (Ad page 16).

Production Die-Casting Company, P. W. Davis, President, 6302 Rusk Ave., Houston, Texas. (Ad page 60).

Southern Airways, Inc., Archie Yawn, Sales Promotion Manager, General Offices—Atlanta Airport, Atlanta, Ga. (Ad page 54).

Southern Letter, S. L. May, Jr., Conway Bldg., N. Atlanta, Ga. (Ad page 77).

ID SECRET SITE SERVICE

There may be sound reasons why you should wish to obtain preliminary information on possible sites without revealing your interest or identity. Recognizing this, INDUSTRIAL DEVELOPMENT offers a Secret Site Service to readers who hold positions of responsibility with manufacturers or other business firms having a legitimate interest in sites. Complete information, including site specification forms, will be sent promptly and confidentially at your request. Address SECRET SITE SERVICE, Conway Publications, Inc., North Atlanta 19, Georgia.



The Colonel Says

'Twas Fungo

Being a Lewis Carroll fan, the Colonel was duly impressed with the following poem which is based upon new words and meanings in the 1958 updating of the American College Dictionary. Any resemblance to Jabberwocky is slightly intended.

'Twas fungo, and the sickle schmo
Did granuloma in the jam,
All flutter was the coolant snow,
And winterize the nomogram.

Go read the ACD, my son,
To know what means the rance and rem,
Go read the entry on Orlon
To case a ploy and BEV a Zen.

Then hanky fringe to anodize
And dantalman the platelet.
But double-take or finalize
The Walter Reuther pinch effect.

And as in ataractic tweezer,
The whirlybird with atarax
Came hypersonic chicken breeder,
Schmidt optics clip withholding tax.

Miltown! Miltown! strobe the square,
The snakeroot toxoid Madison
Avenue, Bonnard, Pierre,
Inhibitor serotonin!

And hast the G-string private prop
To kraft the cheesecake clean?
Bermuda shorts would be ectopic
maser astatine.

'Twas fungo, and the sickle schmo
Did granuloma in the jam.
All flutter was the coolant snow,
And winterize the nomogram.

Words of Wisdom

The cheapest thing is not necessarily always the best.

Bad Heir

If a man punishes his son in order to teach him a lesson, could this be called heir conditioning?

The gay blade's toast . . . Here's to hell:
May the stay there be as pleasant as the way there.

SHIPPING
→ TO
← FROM
OR WITHIN
THE SOUTH?



Call on one of Southern Railway's sales and service representatives for the 'know-how' to move your Southland shipments on dependable schedules at low cost.

Your freight keeps moving on the modern Southern that serves the modern South!

SOUTHERN RAILWAY SYSTEM

Celebrating the opening of the new offices
of the Arkansas Industrial Development Commission.
The achievement of 3½ years on display
in the rotunda of the State Capitol,
products now being manufactured in Arkansas.

*Since July 1955 over 300 plants have chosen
to locate or expand in Arkansas.*

*Over 30,000 new jobs have been announced
in apparel, metal working, rubber, machinery,
chemical, paper, leather and other major
classifications of manufacturing.*

We believe our encyclopedia can tell you why.

*If you are considering a plant location
we'd be pleased to send you the set.*

*The Arkansas Industrial Development Commission,
State Capitol, Little Rock.*

ARKANSAS

